

D-555/Z555

SERVICE MANUAL



Discman

US Model

D-555

AEP Model

UK Model

E Model

D-Z555

Model Name Using Similar Mechanism	D-250
Tape Transport Mechanism Type	CDM-555

SPECIFICATIONS

CD section

System Compact disc digital audio system

Laser diode properties Material: GaAlAs

Wavelength: 780 nm

Emission duration: Continuous

Laser output: Less than 44.6 μ W

This output is the value measured at a distance of 200 mm from the objective lens surface on the Optical Pick-up Block.

Error correction

Sony Super Strategy Cross Interleave Reed Solomon Code

D-A conversion

16-bit linear, 8fs digital filter

Frequency response

20 - 20,000 Hz ± 1 dB*

Signal-to-noise ratio

More than 90 dB

Wow and flutter

Below measurable limit*

Outputs (at 9 V input level)

Line output (stereo minijack)

Output level 0.7 V rms at 50 kilohms

Load impedance over 10 kilohms

Optical digital output (optical output connector)

Output level: -21 - -15 dBm

Wavelength: 630 - 690 nm at peak level

Headphones (stereo minijack)

9 mW + 9 mW at 32 ohms

* Measured by EIAJ CP-307

General

Power requirements

Supplied rechargeable battery pack (BP-2EX) or BP-100 (optional)

DC IN 9 V jack accepts:

Supplied AC power adaptor for use on 120V AC, 60 Hz

Sony CPM-200P car mount plate (optional) or

Sony DCC-120A car battery cord (optional) for use on 12 V car battery

Power consumption

3.2 W DC

Dimension

Approx. 127.6 x 33 x 145 mm (5 x 1 1/16 x 5 11/16 inches) (w/h/d)

not incl. inclined part (depth), projecting parts and controls

Approx. 130 x 33.8 x 145.5 mm (5 1/8 x 1 1/16 x 5 11/16 inches)

(w/h/d) incl. projecting parts and controls

Weight

Approx. 520g (1.2lb) not incl. rechargeable battery

Approx. 600g (1.5lb) incl. rechargeable battery (BP-2EX)

AC power adaptor (1)

Rechargeable battery pack (1)

Carrying case (1)

Connecting cord (1) (stereo miniplug - two phono plugs)

Design and specifications subject to change without notice.

Notes on AC power adaptor

- Disconnect the AC power adaptor when the unit will not be used.
- Use only the supplied AC power adaptor or the recommended car battery cord manufactured by Sony. Polarity of the plugs of other manufacturers may be different.



Polarity of the Sony plug

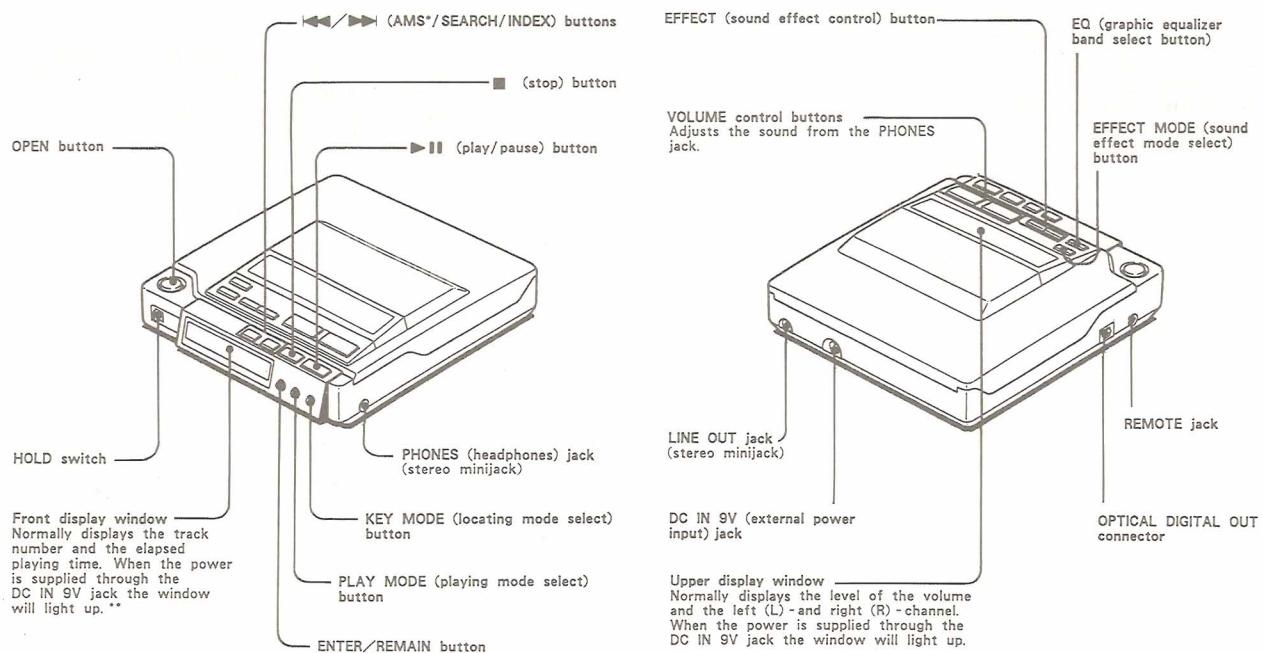
COMPACT DISC COMPACT PLAYER
SONY®

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SECTION 1

GENERAL



*AMS is the abbreviation of Automatic Music Sensor.

**If lit for a long time, the unit may become warm, but that is not a problem.

SECTION 2

SERVICING NOTES

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK

The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.

During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter which is included in the repair parts.

Flexible Circuit Board Repairing

1. Keep the temperature of the soldering iron at $270^{\circ} \pm 10^{\circ}\text{C}$ during repairing.
2. Do not touch the soldering iron more than 4 seconds or 3 times on the same conductor of the circuit board.
3. Do not apply force on the conductor when soldering or unsoldering.

Before Replacing the Optical Block

Please be sure to check thoroughly the parameters as per the "Optical Block Checking Procedures" (Part No.: 9-960-027-11) issued separately before replacing the optical block.

Note and specifications required to check are given below.

- FOK output: IC501 (9) pin
When checking FOK, remove the lead wire to disc motor and unsolder and open IC801 (24) pin.
- S carve P-to-P value: 2.95 Vp-p
- Adjusted part for focus gain adjustment: RV505
- RF signal P-to-P value: 0.75 – 1.4 Vp-p
- Traverse signal P-to-P value: 1.8 Vp-p
- The grating holder can not repair.
- Adjusted part for tracking gain adjustment: RV501

Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK  OR DOTTED LINE WITH MARK  ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe, from more than 30 cm away from the objective lens.

Laser Diode Check Procedure

The laser diode on this set will not emit unless the top panel is closed and S901 (leaf SW type) is turned on. The laser diode will always emit even if focus search is not performed in service mode.

The laser diode is checked using the current value which flows to the laser diode inside the UPF.

Procedure 1 (service mode or normal operation)

Check the laser diode emission with the eye.

1. Open upper panel.
2. S901 on as Fig. 1.
(In service mode, this operation is not necessary.)
3. Press the **►||** key.
(In service mode, this operation is not necessary.)
4. Observe the objective lens and confirm that the laser diode is emitting light. At this time, the laser diode goes on about 10 seconds due to focus serach. If it does not, APC circuit or UPF is defective.

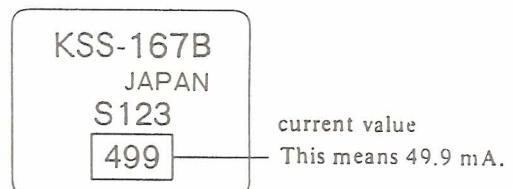


Fig. 1 Turning S901 on

Procedure 2 (service mode or normal operation)

Check by the current with flows in the laser diode.

1. Close the top panel.
2. Remove the main board and read the current value on the label affixed to the UPF.
(Label on UPF)



The current value varies with the set.

3. Connect a VOM as shown in Fig. 2.
4. Press the $\blacktriangleright \blacksquare \blacksquare$ key.
5. Calculate the current by the VOM reading.
VOM reading (V) \div 10 = current (A)
ex. VOM reading = 0.49 V
 $0.49 \div 10 = 0.049$ (A) = 49 (mA)

6. Confirm that the ammeter reading is within the range given below.

value on label ${}^{+5}\%$, mA (25°C)

variation relative to temperature:

0.4 mA/°C

(Current increases when temperature rises and decreases when it drops.)

If the value is more than the range given, APC circuit has been defective or the laser diode has deteriorated. If it is less, APC circuit or LPE is defective.

circuit or OFF is defective.

— servo board —

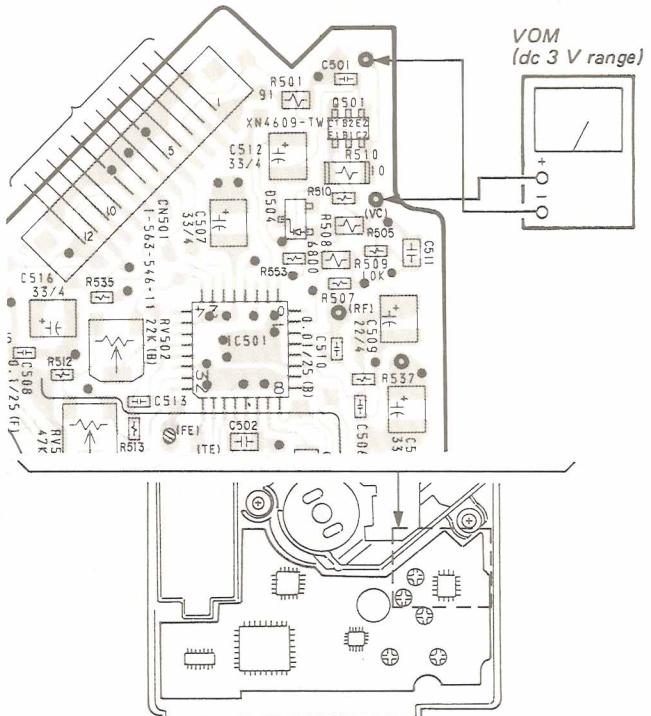


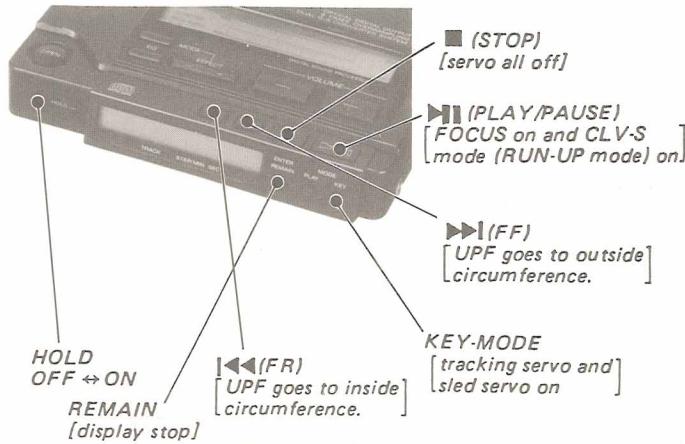
Fig. 2 VOM Connection

SERVICE MODE (service program)

This set has built-in service program in the micro-computer as usual sets.

The operation method of service program is explained below.

[]: Main operation in service mode
for details, refer to step 2.



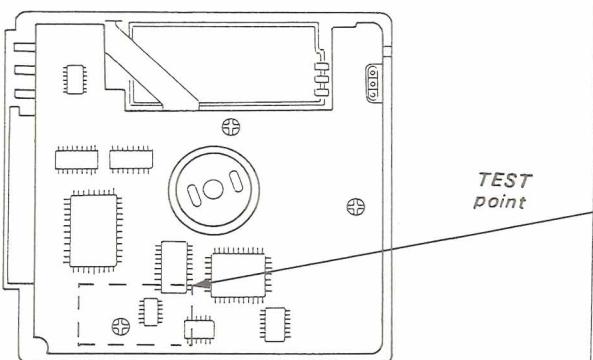
Be sure to set HOLD switch OFF.
If not key inputs can not be operated.

Fig. 3 Key Positions

Step 1 (Service Mode setting method)

1. Turn the HOLD switch OFF with the external power supply not plugged in (no power applied to set) and press the ►■ key.
2. Solder jumper TEST point.
(IC801 pin 9 (BAT-E) pin is grounded.)
3. Plug in external power supply.
This puts the set into service mode.

— main board —



Step 2 (Service Mode operation)

1. When service mode is set, the display will change 6 times, and those 6 changes will be repeated over and over.
With this the LCD display should be present in service mode. Even if LCD does not display, other operations will be performed.
2. When ►■ or ■ key is pressed, the UPF moves to the inside or outside circumference. Tracking servo and sled servo go off when this is done, so press KEY-MODE to turn on the tracking servo if necessary.
3. When REMAIN is pressed, the display stops. When REMAIN is released, the display continues to change. This allows check of each segment.
4. When ►■ key is pressed, CLV-S (pull-in mode) starts while performing focus search. When there is no disc installed, focus search is repeated several times while disc motor is rotating.
5. When KEY-MODE is pressed, tracking servo, sled servo and CLV-A (servo during PLAY) go ON.
6. When 4 and 5 are performed, the disc begins to play. At this time, the top panel should be closed and S901 are to be ON.
7. All servo (focus, tracking, sled and spindle) go off when ■ key is pressed. But disc motor continues rotating for a while by inertia.

Step 3 (Service Mode release)

1. First be sure to unplug the external power supply, then remove the TEST point solder jumper.
2. The set will now operate normally.

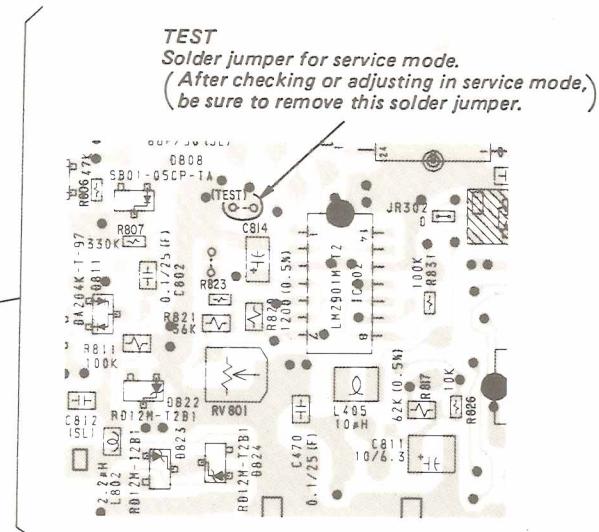


Fig. 4 TEST Point Position

SECTION 3

ELECTRICAL ADJUSTMENTS

Notes on Adjustment

1. Perform adjustments except for RECHARGEABLE VOLTAGE ADJUSTMENT and BATTERY DISPLAY ADJUSTMENT in service mode. Be sure to release service mode after completing adjustment.
(Refer to "Service Mode (service program)" on page 5.)
2. Perform adjustments in the order given.
3. Use YEDS-18 disc (part No.: 3-702-101-01) unless otherwise indicated.
4. Power supply voltage: DC 9 V
HOLD switch: OFF

PREPARATION

Put the set into service mode (see page 5) and perform the following checks. Repair if there are any abnormalities.

- Sled Motor Check

1. Press the OPEN button and open the top panel.
2. Press the **▶▶** , **◀◀** keys and make sure that the UPF moves smoothly, without catching, from the inmost → outmost → inmost circumference.

►: UPF moves outward

◀◀ : UPF moves inward

- Focus Search Check

1. Press the OPEN button and open the top panel.
2. Press the **►■■** key. (Focus search is performed continuously.)

3. Observe the UPF objective lens and check that it moves smoothly up and down with no catching or noises.

4. Press the ■ key.

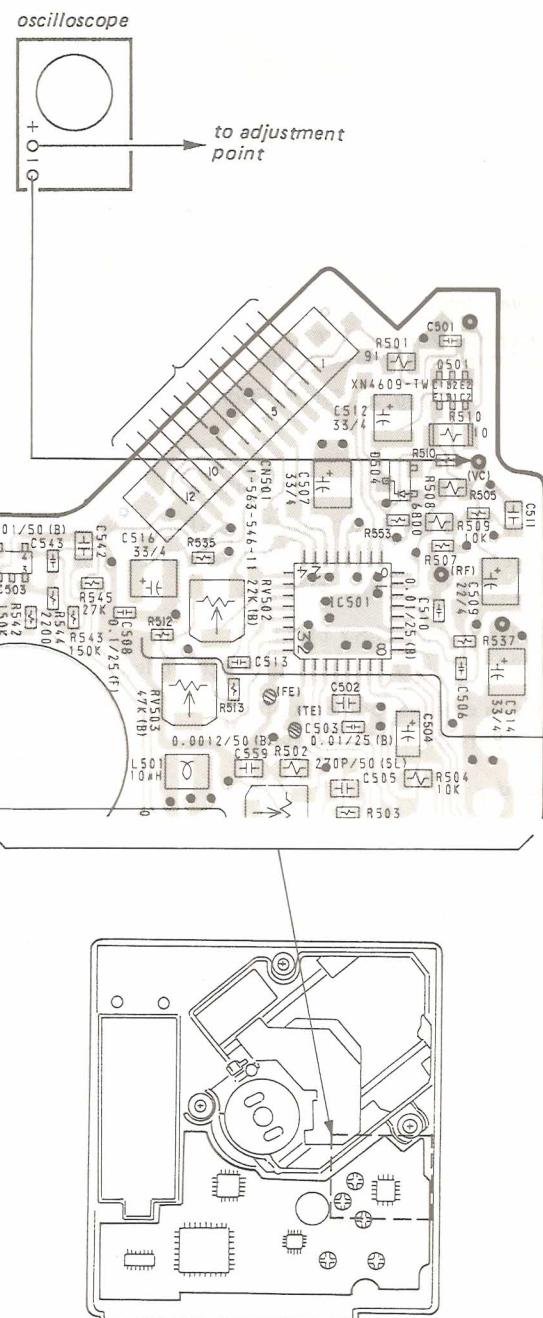
Check that focus search operation stops. If it does not stop, press the ■ key again longer than before. But disc motor continues rotating for a while by inertia.

VC (1/2 Vcc) Connecting Point

FOCUS BIAS ADJUSTMENT

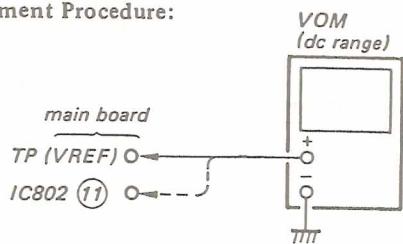
TRACKING BALANCE ADJUSTMENT

When the adjustments above are performed, connect the $(-)$ side of oscilloscope to the point below.



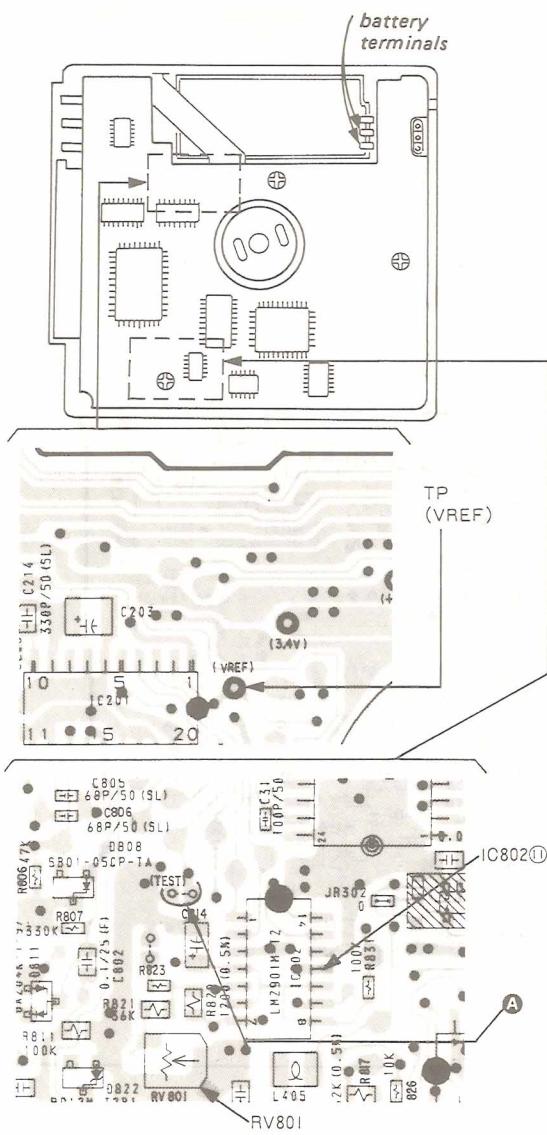
Battery Display Adjustment

Adjustment Procedure:



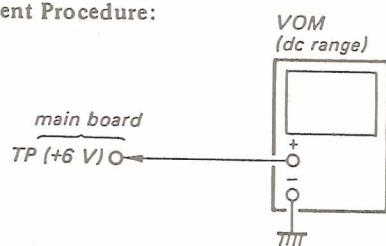
1. Apply dc +3.5 V to terminals for built in battery (BP-2).
2. Insert the disc (YEDS-18) and put the set into play mode.
3. Adjust RV801 so that main board IC802 (11) voltage and TP (VREF) voltage are equal.
4. If IC802 (11) voltage is higher than TP (VREF) voltage when turning the RV801 fully counter-clockwise, short the jumper point (A) as shown below and adjust RV801.

Adjustment Location: main board



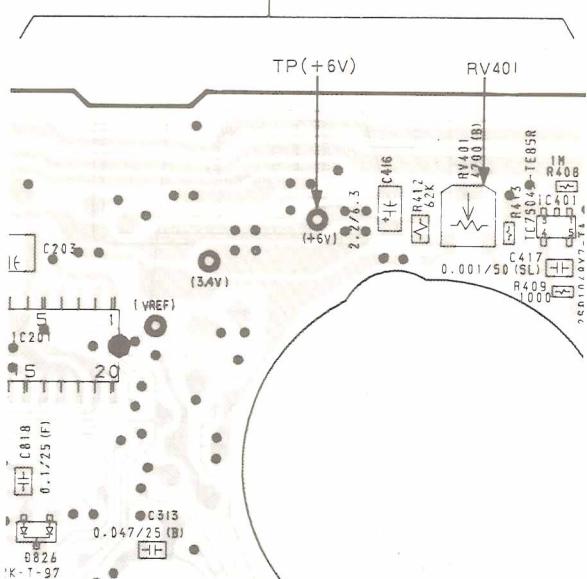
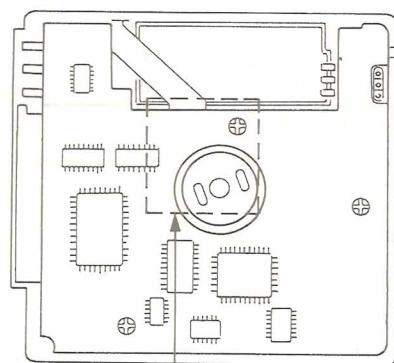
+6 V Adjustment

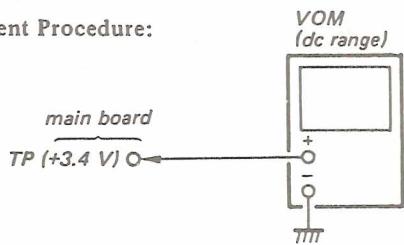
Adjustment Procedure:



1. Put the set into service mode (see page 5).
2. Connect the VOM to main board TP (+6 V).
3. Adjust RV401 for $+6 \pm 0.1$ V reading on the VOM.
4. After adjustment, release service mode (see page 5).

Adjustment Location: main board



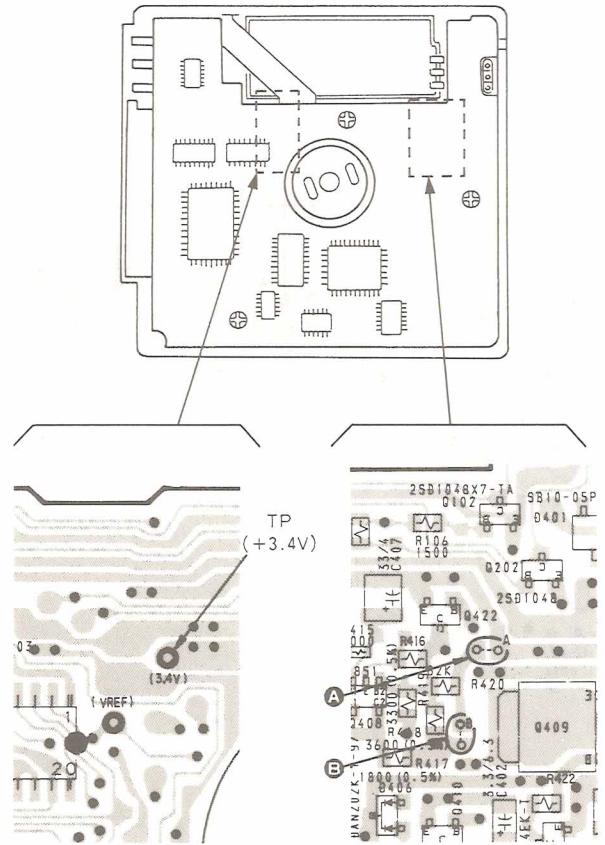
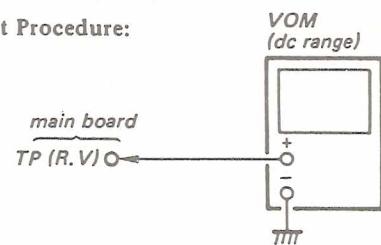
+3.4 V Adjustment**Adjustment Procedure:**

1. Put the set into service mode (see page 5).
2. Connect the VOM to main board test point TP (+3.4 V).
3. Adjust the pattern connecting (A or B) to obtain 3.4 to 3.55 V reading on the VOM.

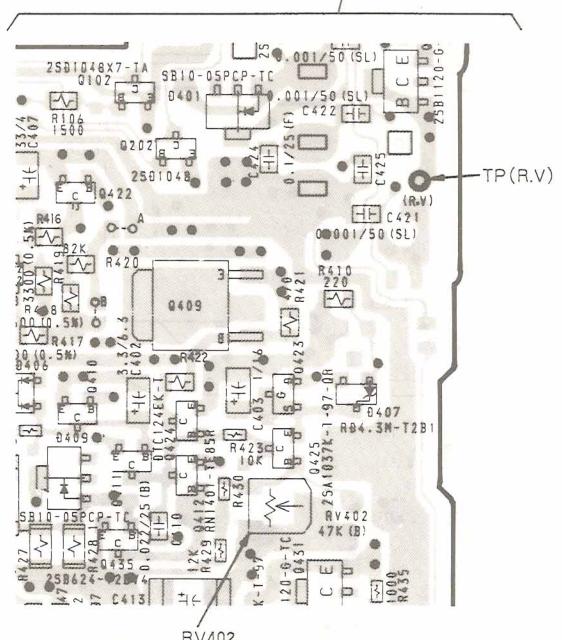
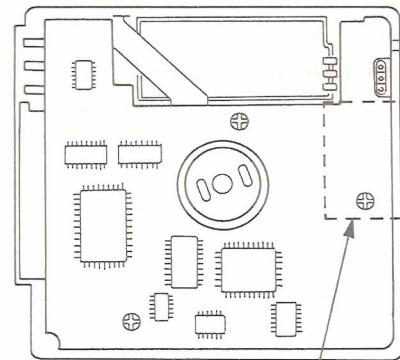
pattern connection		VOM reading
A	B	
○	X	down
X	X	up
X	○	up
○	○	up

○: short X: open

4. After adjustment, release service mode (see page 5).

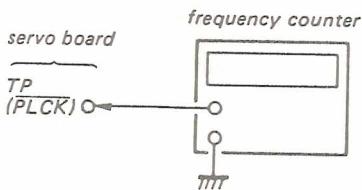
Adjustment Location: main board**Rechargeable Voltage Adjustment****Adjustment Procedure:**

1. Connect the VOM to main board test point TP (R.V).
2. Apply DC 9 V with required dc power supply from external power jack CN401.
3. Adjust RV402 for 7.05 – 7.5 V reading on the VOM.

Note: Measure after the VOM reading becomes stable.**Adjustment Location:** main board

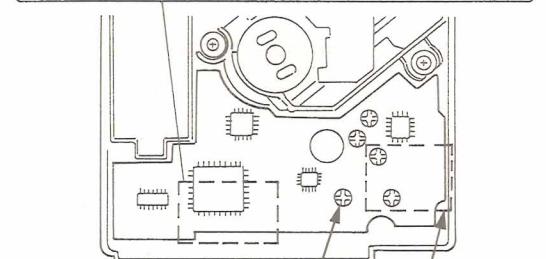
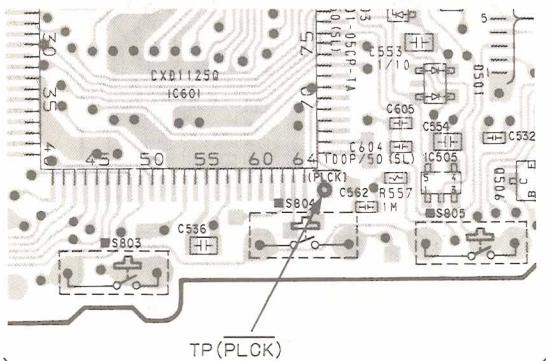
PLL Free Run Frequency Check and Adjustment

Check/Adjustment Procedure:

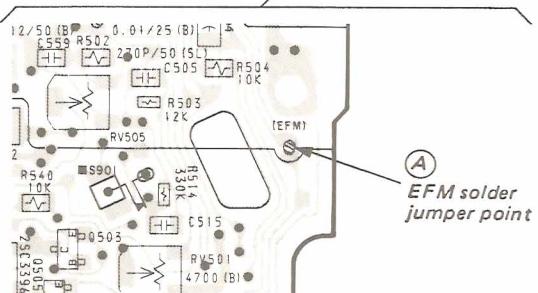


1. Disconnect the jumper point **(A)** (EFM) in the diagram below.
2. Connect a frequency counter to servo board test point TP **(PLCK)**.
3. Put the set into service mode (see page 5).
4. Check that the frequency counter reading is 4.3218 ± 0.01 MHz. If not, adjust RV504 so that it is 4.3218 ± 0.01 MHz.
5. After adjustment, release service mode (see page 5).
6. Short the jumper point shorted in step 1.

Check/Adjustment Location: servo board



(A) *EFM solder jumper point*
(Disconnect for checking and
adjustment. Short after
checking and adjustment.

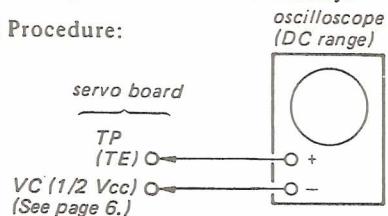


Tracking Balance Adjustment

Conditions:

The set should be placed either horizontally.

Adjustment Procedure:

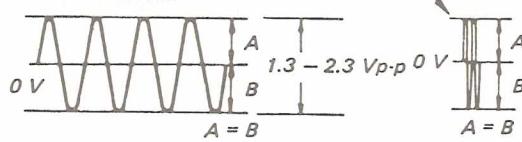


1. Connect the oscilloscope to servo board TP (TE).
2. Put the set into service mode (see page 5).
3. Press the **►|** and **|◀** keys to move the UPF to the center.
4. Insert the disc (YEDS-18) and close the top panel.
5. Press the **►||** key.

(It will go from focus search to focus on, and CLV pull-in mode state. Tracking and sled are OFF.)

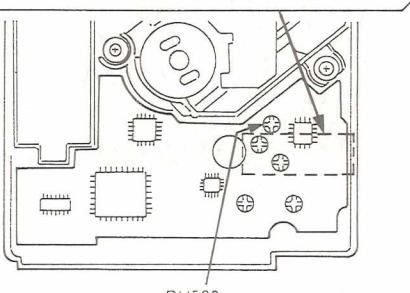
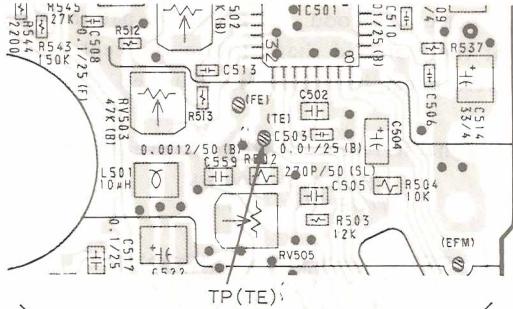
6. Adjust RV502 so that the oscilloscope waveform is symmetrical on the top and bottom in relation to 0 V.

Note: Take sweep time as long as possible to obtain best waveform.



7. Unplug the external power supply to stop spindle motor from rotating.
8. After adjustment, release service mode (see page 5).

Adjustment Location: servo board

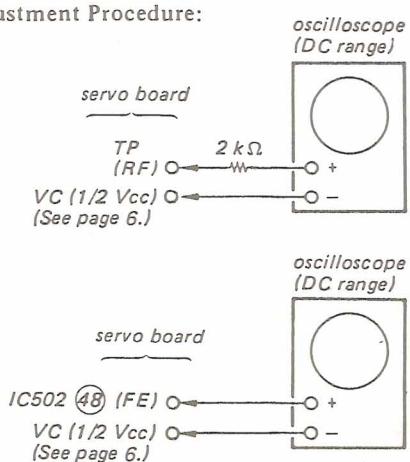


Focus Bias Adjustment

Conditions:

The set should be placed either horizontally.

Adjustment Procedure:



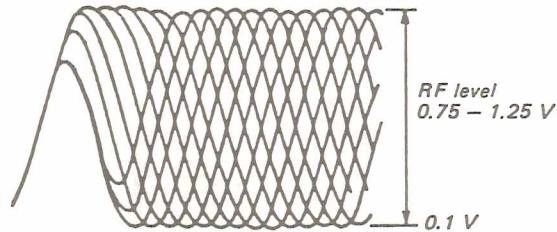
1. Put the set into service mode (see page 5).
2. Connect the oscilloscope to servo board test point TP (RF).
3. Press the \blacktriangleright and \blacktriangleleft keys to move the UPF to the center. (Move the UPF to the music area on the disc to enable easy visibility of the eye pattern).
4. Insert the disc (YEDS-18) and close the top panel.
5. Press the \blacktriangleright key.

(It will go from focus search to focus on, and CLV pull-in mode state. Tracking and sled are OFF.)
6. Press the KEY-MODE button. (Tracking and sled go ON.)
7. Adjust RV503 so that the oscilloscope waveform eye pattern is good. A good eye pattern means that the diamond shape (\diamond) in the center of the waveform can be clearly distinguished.

● RF Signal Reference Waveform (eye pattern)
VOL T/DIV: 200 mV

- RF Signal Reference Waveform (eye pattern)

VOLT/DIV: 200 mV
TIME/DIV: 500 nS



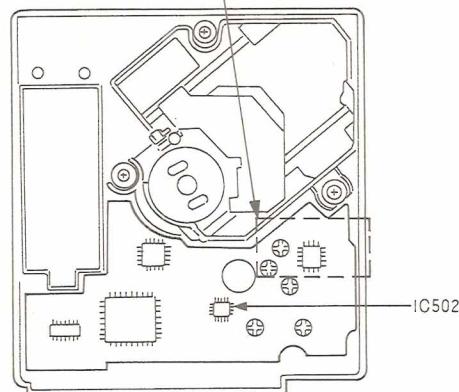
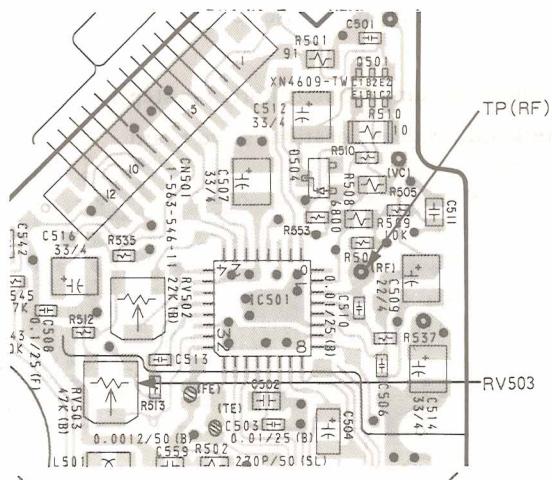
When observing the eye pattern, set the oscilloscope for AC range and raise vertical sensitivity.

8. Push the ■ (STOP) button spindle motor from rotating and remove the disc.
9. Remove the disc and connect the oscilloscope to main board IC502 48 (FE).
10. Adjust RV503 again referring to the table followed.

oscilloscope reading	adjustment
more than +50 mV	Not adjust again.
+50 mV ~ +20 mV	Adjust RV503 again for +50 mV reading on oscilloscope.
+20 mV ~ -20 mV	Adjust RV503 again for -20 mV reading on oscilloscope.
less than -20 mV	Not adjust again.

11. After adjustment, release service mode (see page 5).

Adjustment Location: servo board



Focus/Tracking Gain Adjustment

A frequency response analyzer or CD jig is necessary in order to perform this adjustment exactly.

However, this gain has a margin, so even if it is slightly off, there is no problem. Therefore, do not perform this adjustment.

Focus/tracking gain determines the pick-up followup (vertical and horizontal) relative to mechanical noise and mtechical shock when the 2-axis device operate. However, as these reciprocate, the adjustment is at the point where both are satisfied.

- When gain is high, the noise when the 2-axis device operates increases.
- When gain is low, it is more susceptible to mechanical shock and skipping occurs more easily.

This adjustment is to be performed when replacing the following parts:

- optical pick-up block
- RV505 (focus gain VR)
- RV501 (tracking gain VR)

Be careful not to move RV505 (focus gain volume) and RV501 (tracking gain volume) ordinarily.

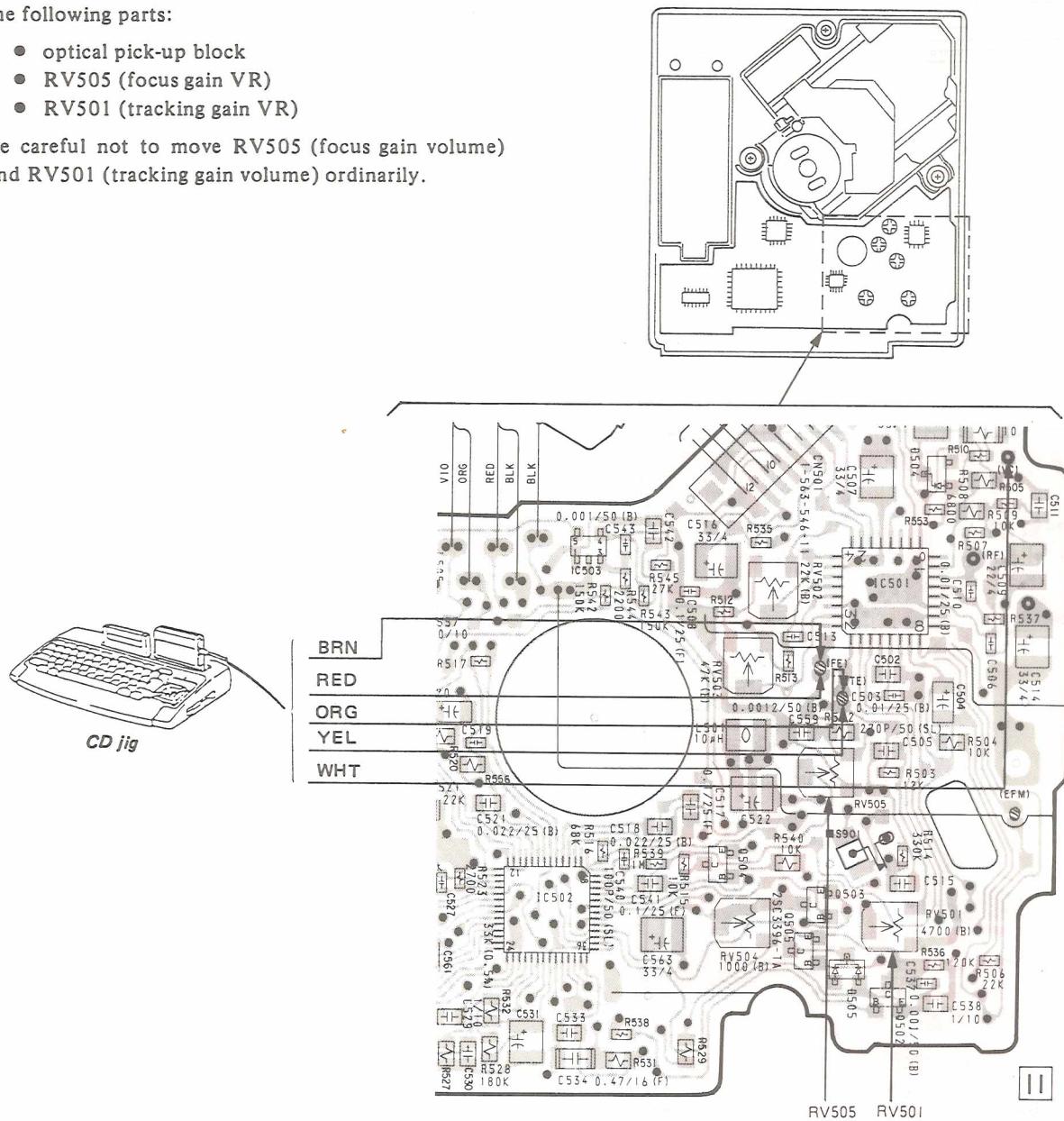
On this set, it is very difficult to simplify this adjustment. For those sets on which symptoms such as "occasional skipping" are hard to discover, or it is hard to tell if the set has been repaired, use the CD jig and perform this adjustment. Refer to the diagram below for connection of the CD jig. The adjustment procedure is described in the separate CD Jig Instruction Manual.

CD Jig Connecting Procedure:

Remove the solder jumpers at the TE and FE locations and connect the DC jig.

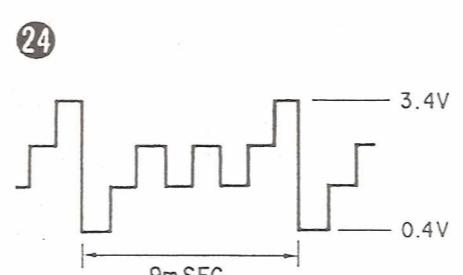
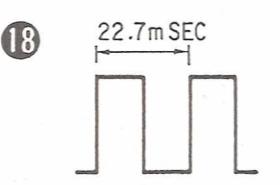
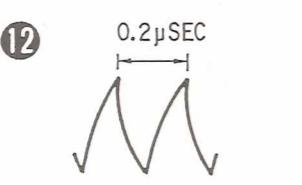
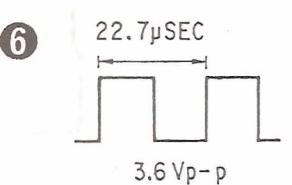
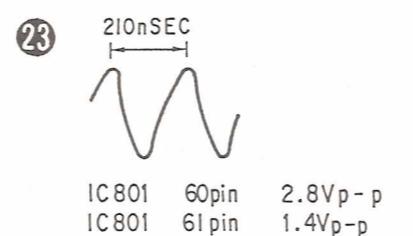
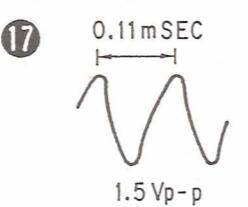
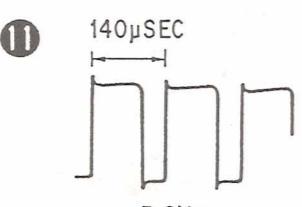
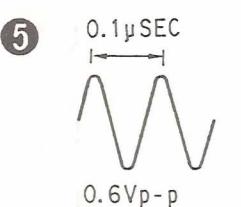
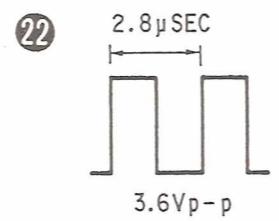
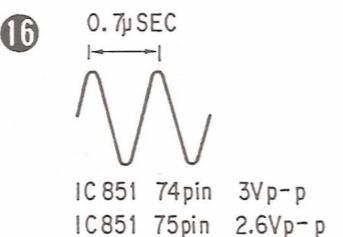
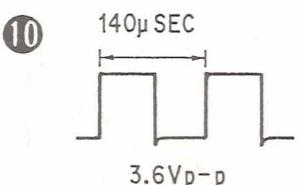
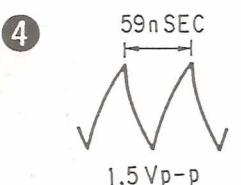
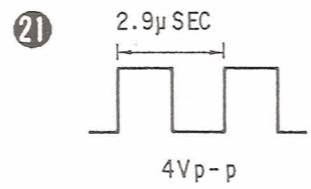
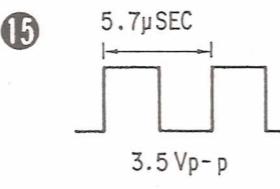
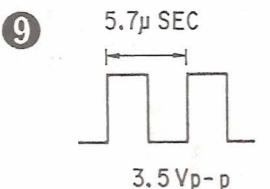
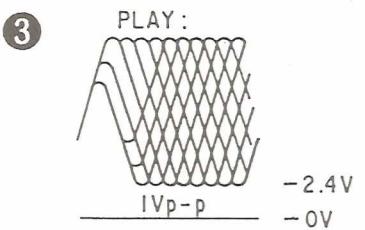
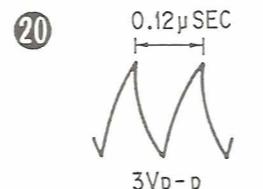
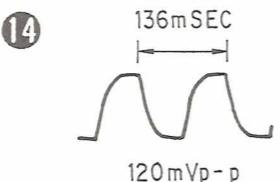
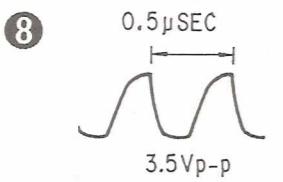
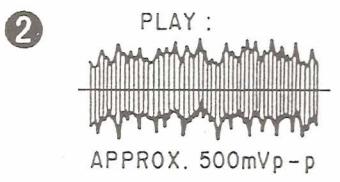
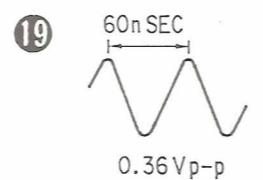
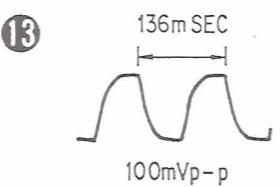
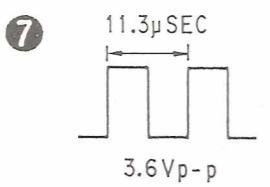
(Connect the points on both TE and FE located on the side of IC501 to the output to the CD jig, and points located on the side of volumes to the input from the CD jig.)

— servo board —

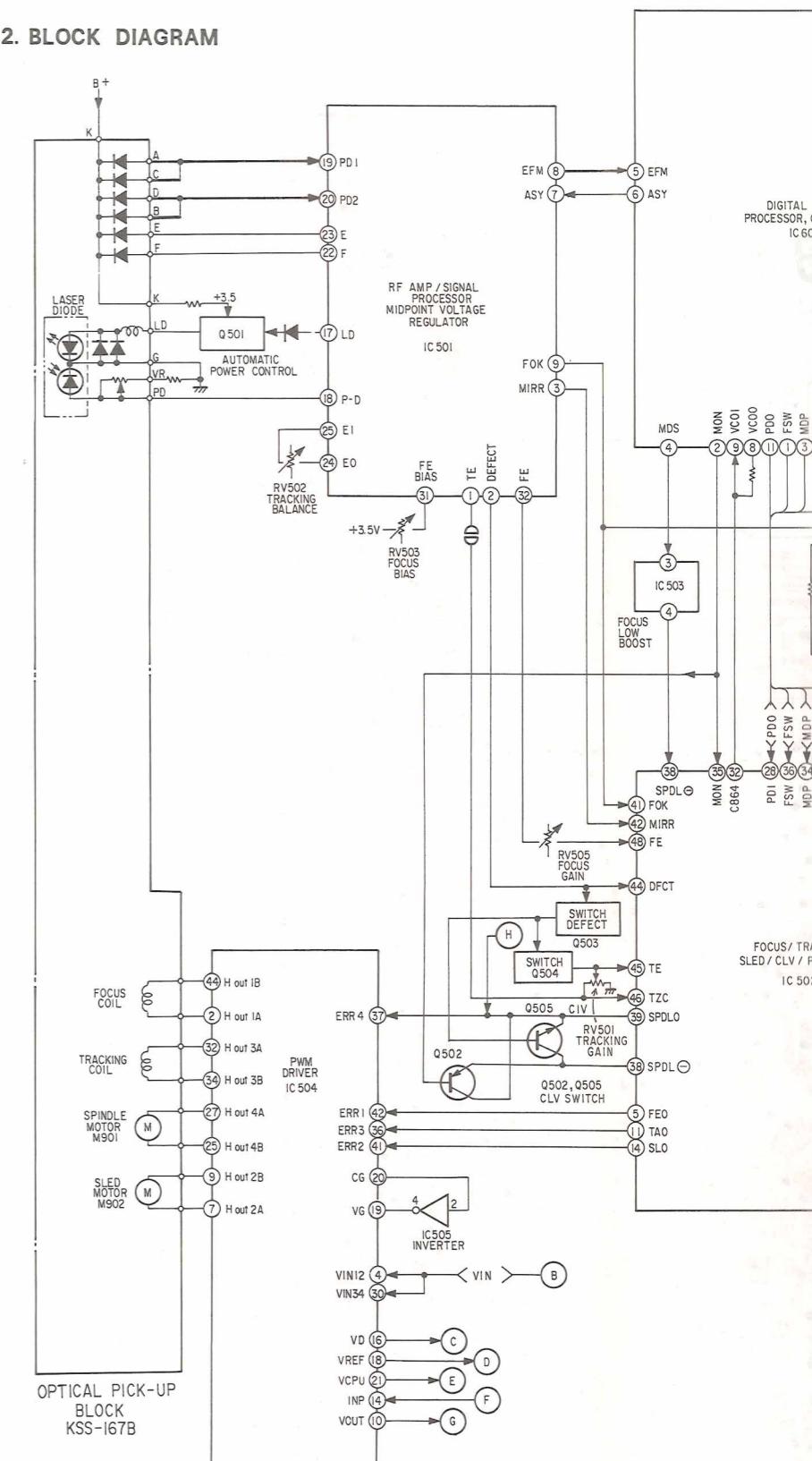


SECTION 4 DIAGRAMS

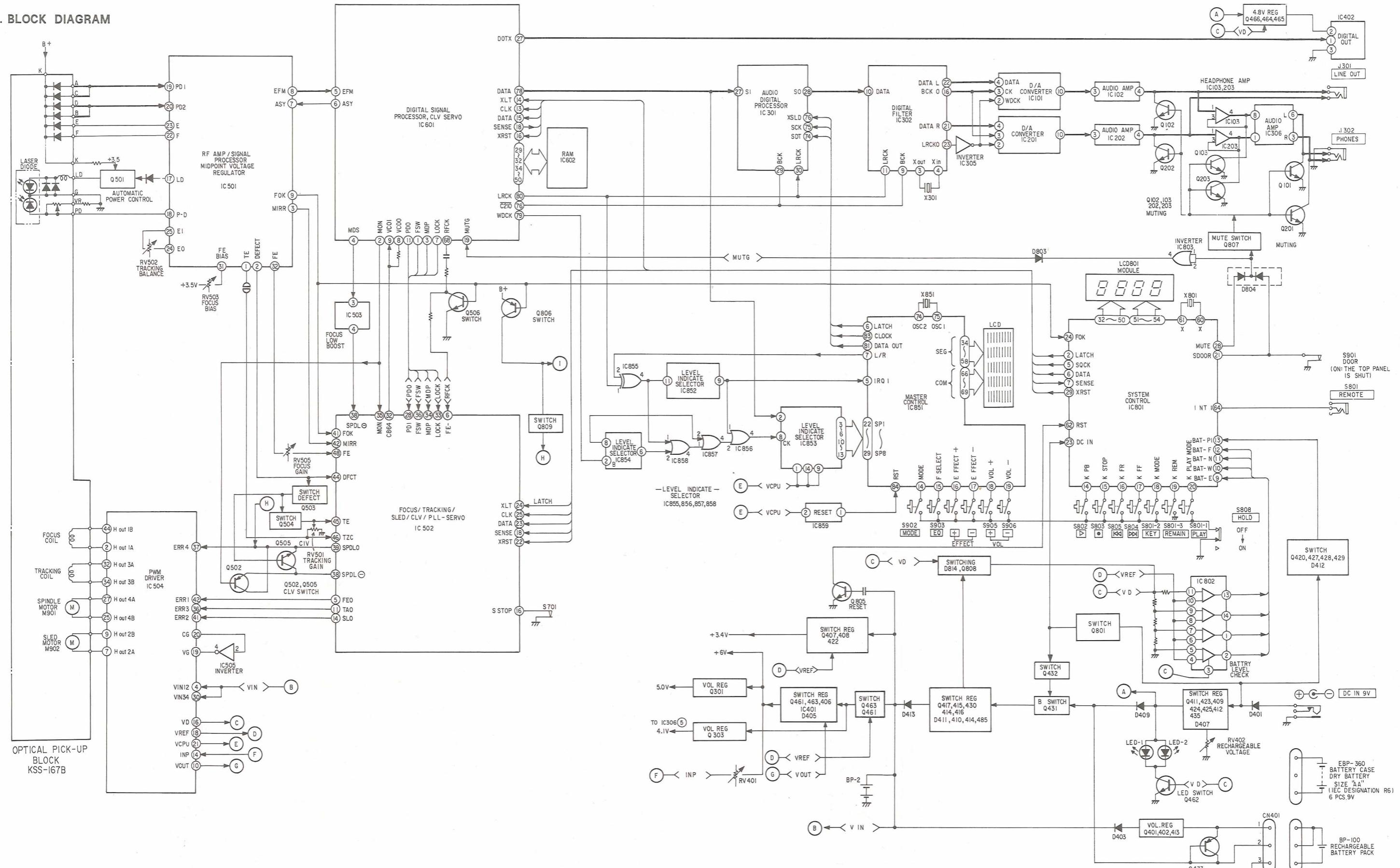
4-1. WAVEFORMS



4-2. BLOCK DIAGRAM



4-2. BLOCK DIAGRAM



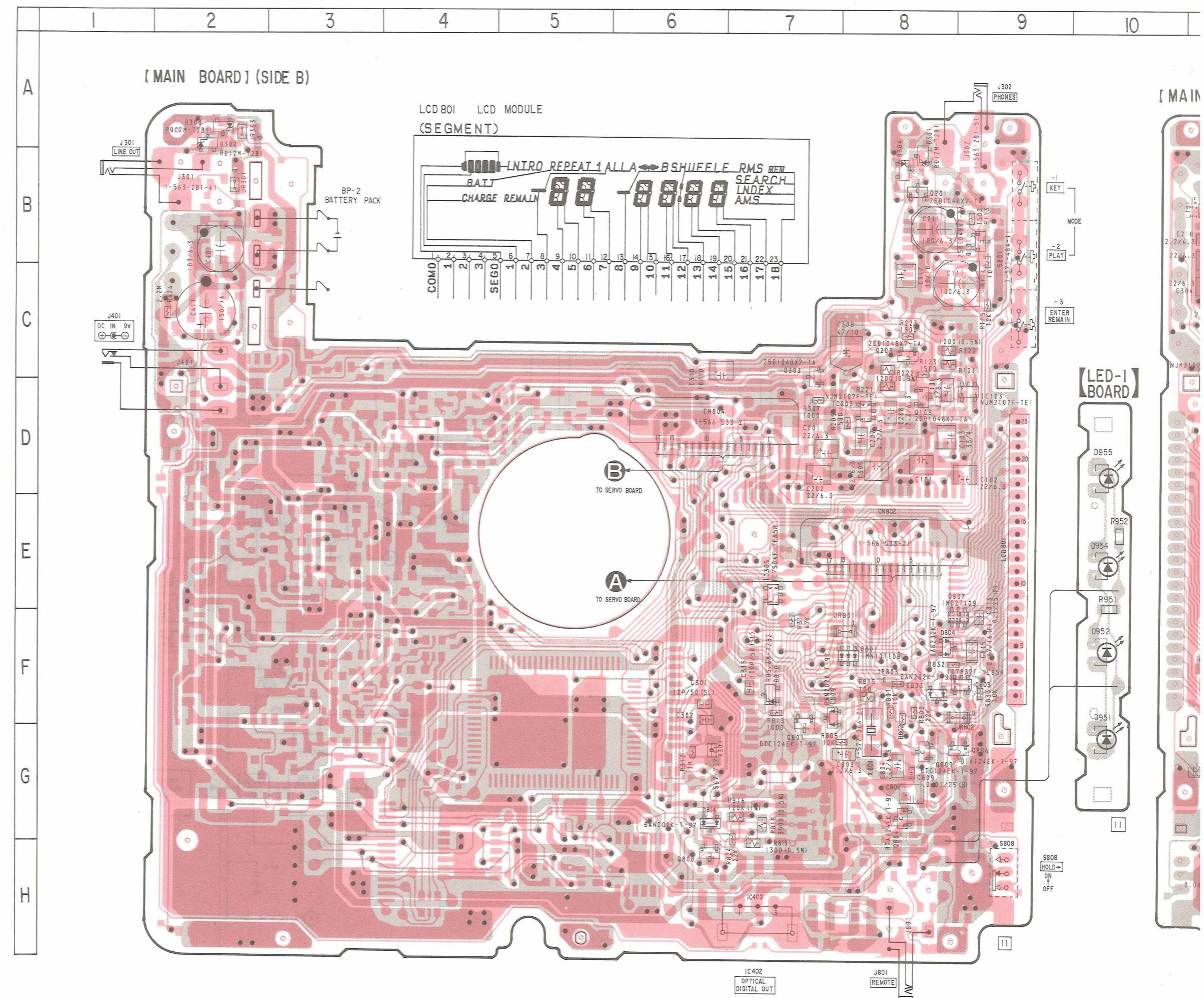
- Semiconductor Lead Layouts

Ref. No.	Location	Ref. No.	Location
D301	A-8	IC802	G-13
D302	A-2	IC803	F-9
D303	A-2	IC851	F-22
D304	B-8	IC852	H-15
D305	H-16	IC853	F-21
D401	C-17	IC854	H-14
D403	B-17	IC855	H-15
D405	D-15	IC856	G-14
D406	E-16	IC857	H-14
D407	E-18	IC858	H-14
D409	E-16	IC859	G-21
D410	F-16		
D411	G-16	Q101	B-9
D412	F-16	Q102	C-17
D413	G-17	Q103	D-8
D414	F-18	Q201	B-8
D415	G-17	Q202	D-17
D450	E-15	Q203	C-8
D485	F-16	Q301	D-12
D801	F-8	Q303	C-7
D803	F-8	Q401	C-18
D804	F-8	Q402	B-17
D805	G-11	Q403	F-16
D807	G-11	Q406	D-15
D808	G-12	Q407	D-16
D809	F-7	Q408	D-16
D810	F-7	Q409	D-17
D811	G-12	Q410	E-16
D813	G-11	Q411	E-17
D814	G-6	Q412	E-17
D822	H-12	Q413	C-18
D823	H-12	Q414	G-16
D824	H-12	Q415	G-17
D825	G-11	Q416	F-17
D826	E-13	Q417	F-17
D901	A-20	Q418	F-17
D902	A-20	Q420	F-15
D903	A-20	Q421	F-16
D904	A-21	Q422	D-16
D905	A-21	Q423	E-17
D906	A-22	Q424	F-17
D907	A-22	Q425	E-17
D908	A-22	Q427	F-16
D909	A-23	Q428	F-16
D910	A-23	Q429	F-16
D911	A-24	Q430	F-16
D951	G-10	Q431	F-17
D952	F-10	Q432	F-17
D954	E-10	Q433	C-18
D955	D-10	Q435	E-17
		Q461	D-15
IC101	D-11	Q462	G-17
IC102	C-11	Q463	D-16
IC103	D-9	Q464	E-16
IC201	D-12	Q465	E-16
IC202	D-12	Q466	E-15
IC203	D-8	Q801	F-7
IC301	F-14	Q804	G-8
IC302	F-13	Q805	G-11
IC305	E-7	Q806	G-9
IC306	B-11	Q807	E-9
IC401	C-15	Q808	H-6
IC402	H-7	Q809	G-8
IC801	F-11		

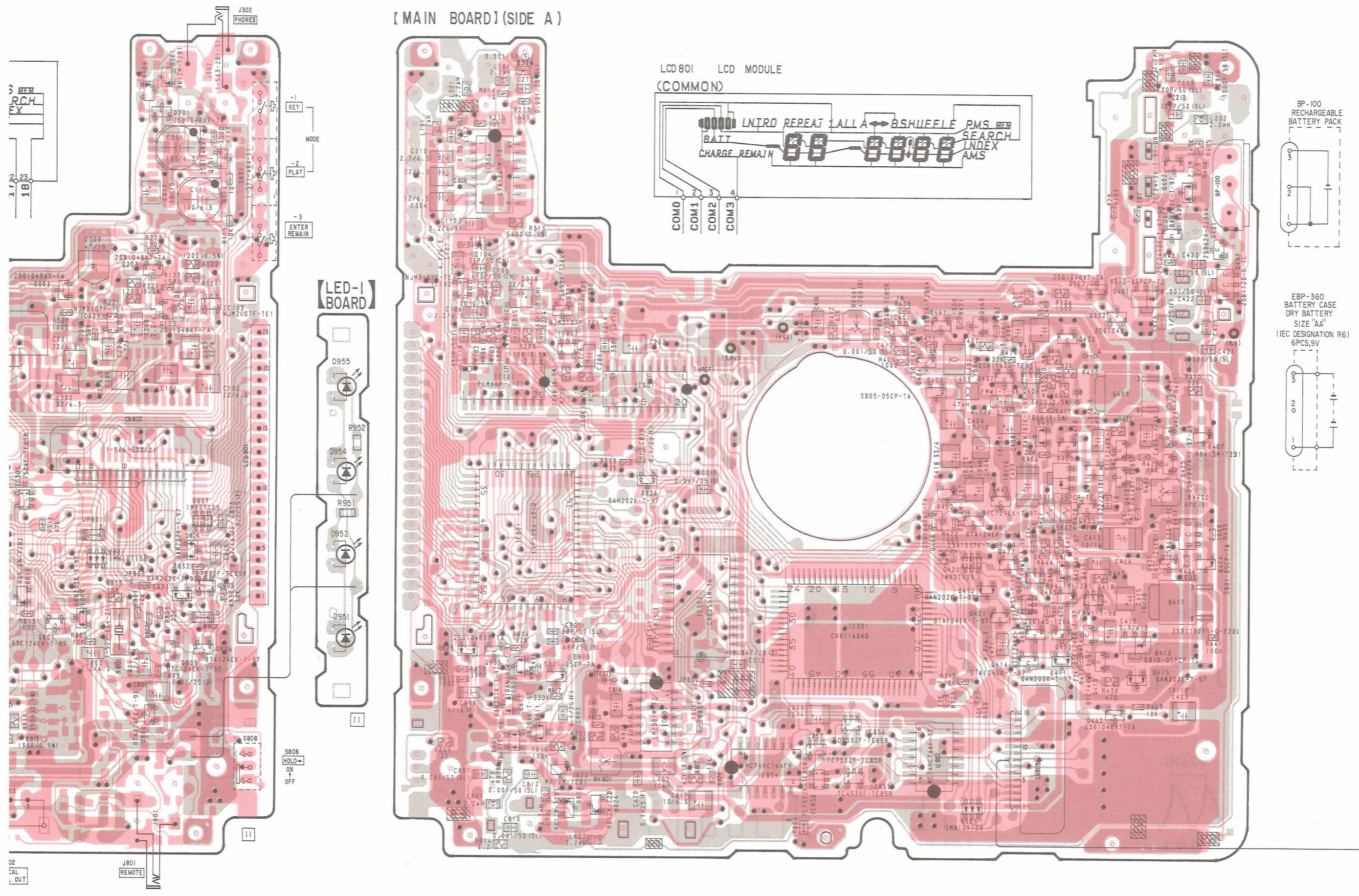
Note:

- : Through hole.
- : Pattern on the side which is seen.
- : Pattern of the rear side.

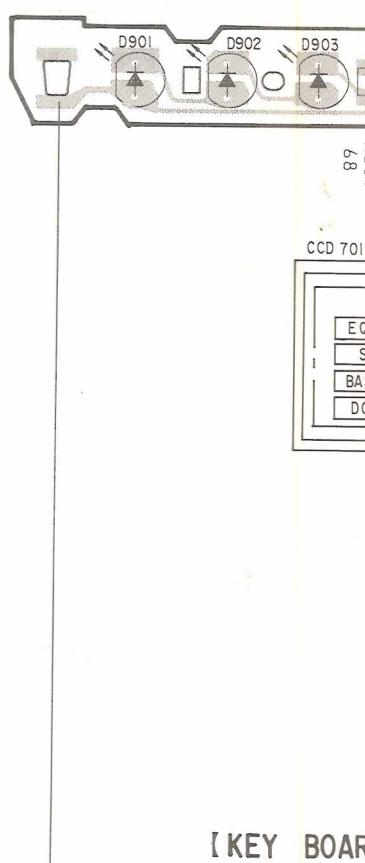
[MAIN BOARD] (SIDE B)



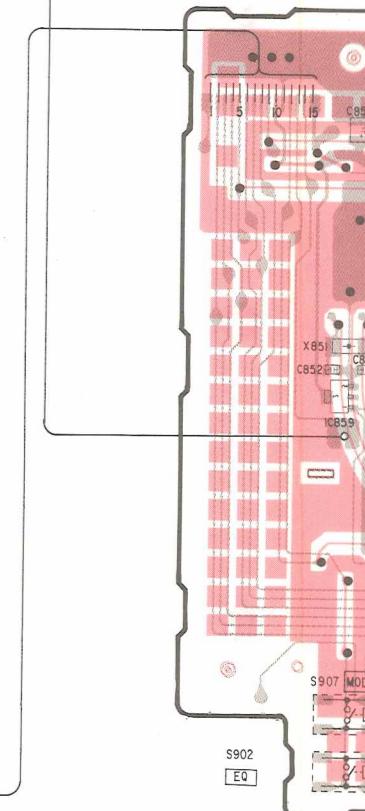
【 MAIN BOARD】(SIDE A)

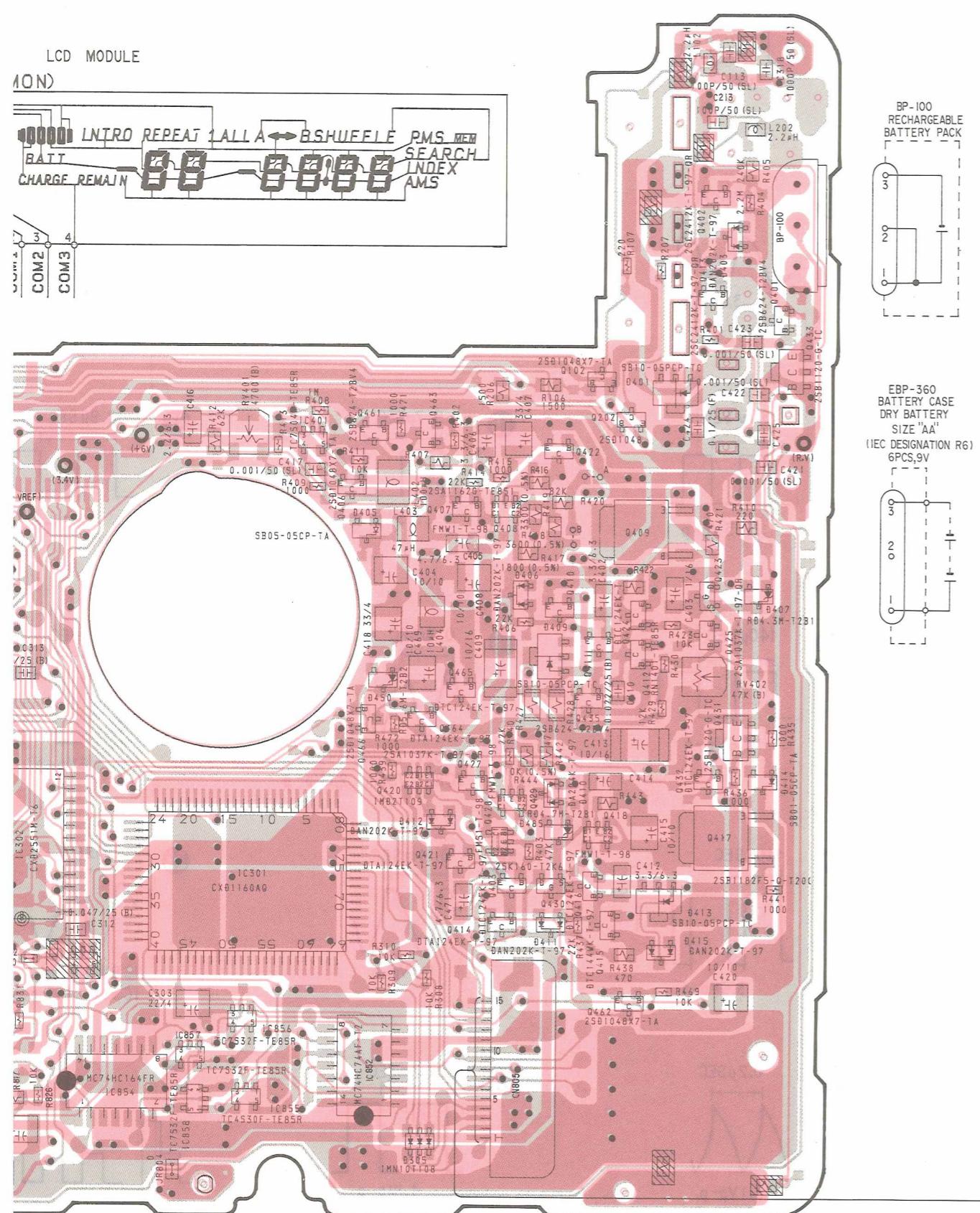


【 LED - 2 BOARD 】

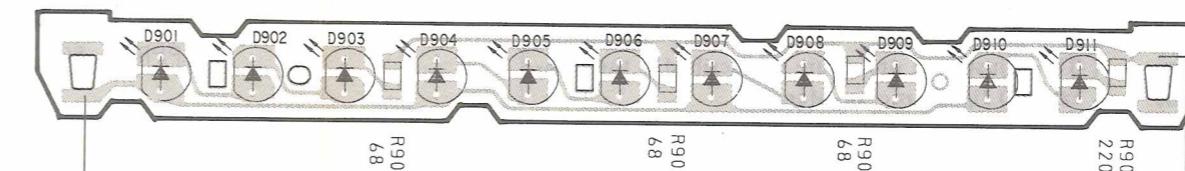


KEY BOARD

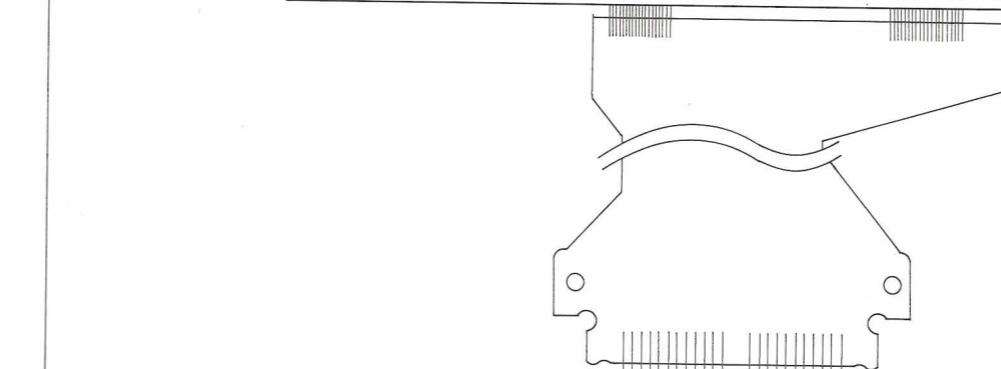




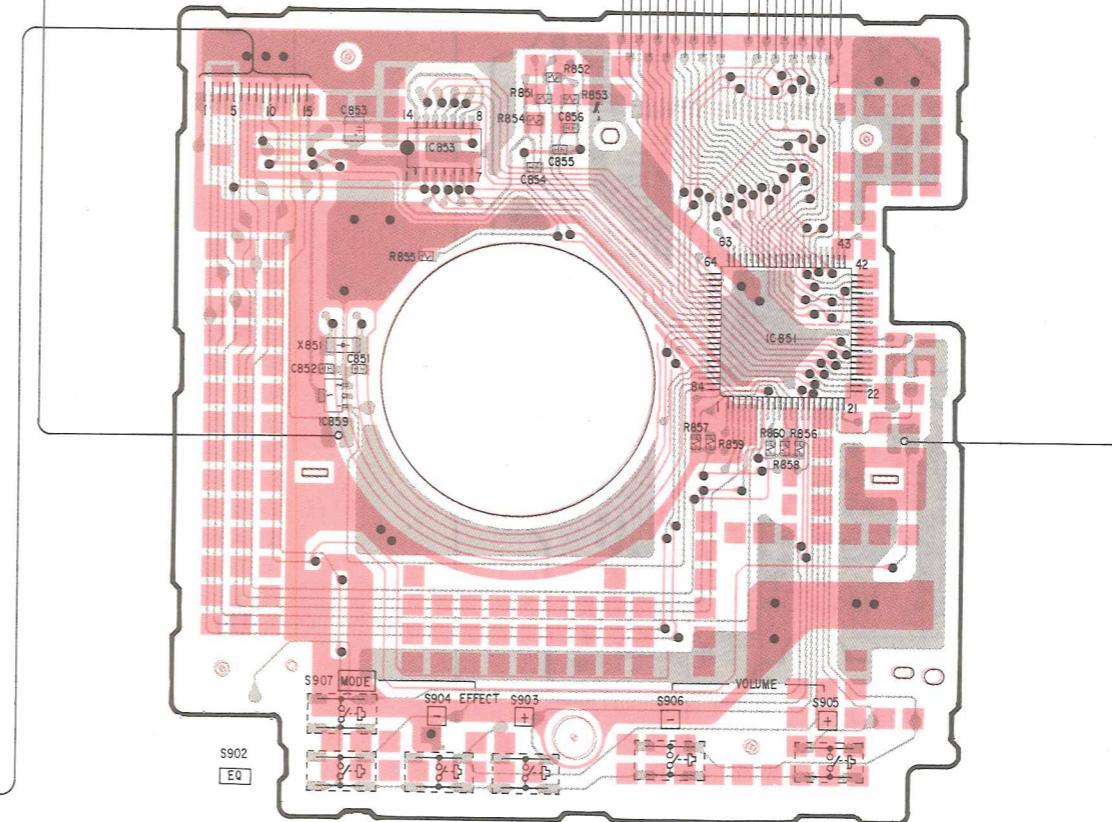
【 LED - 2 BOARD



EBP-360
BATTERY CASE
DRY BATTERY
SIZE "AA"
(IEC DESIGNATION)



KEY BOARD

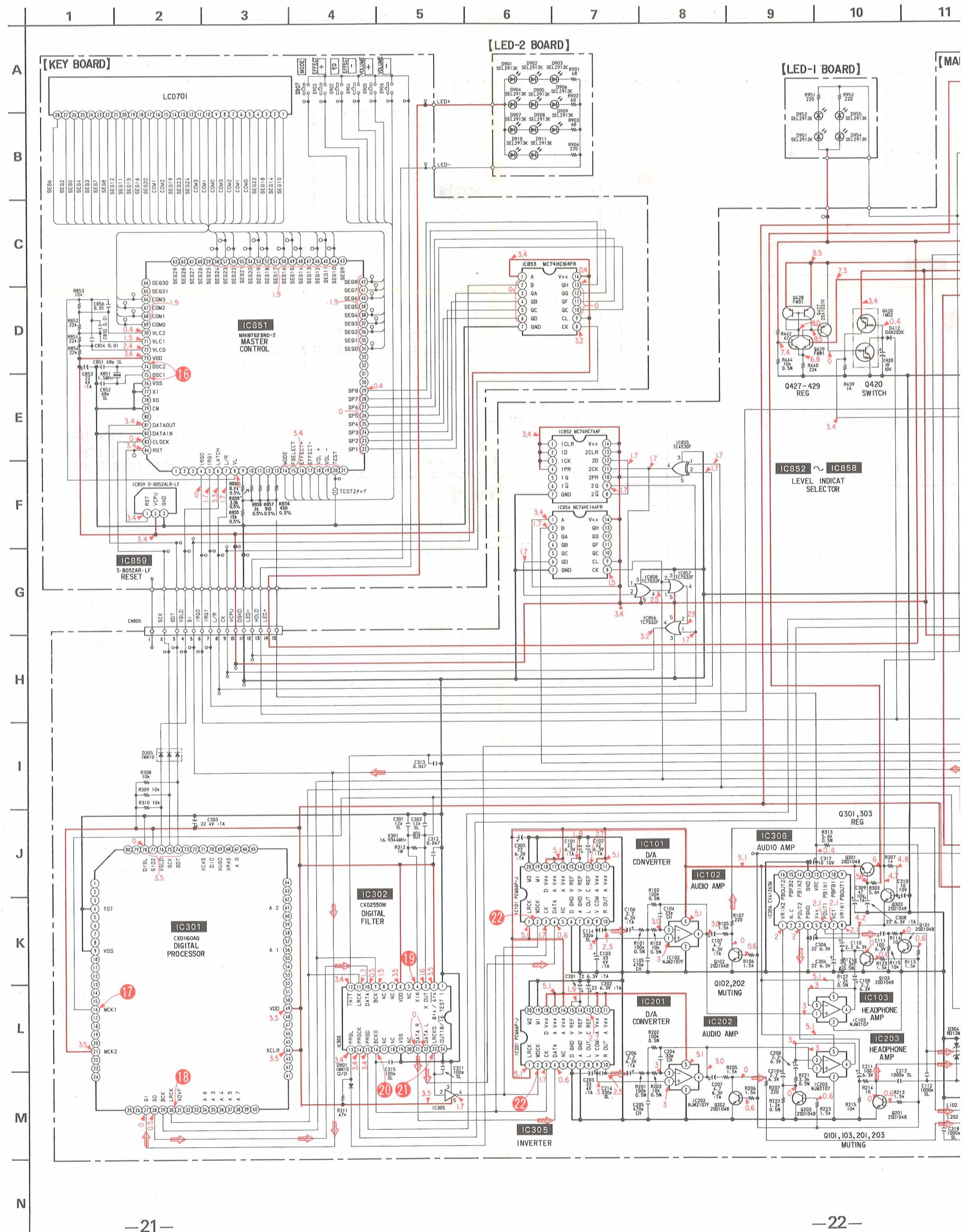


4-4. SCHEMATIC DIAGRAM

—MAIN SECTION—

- See page 12 for waveforms.

- See page 31 for IC block diagram.



Note:

NOTE:

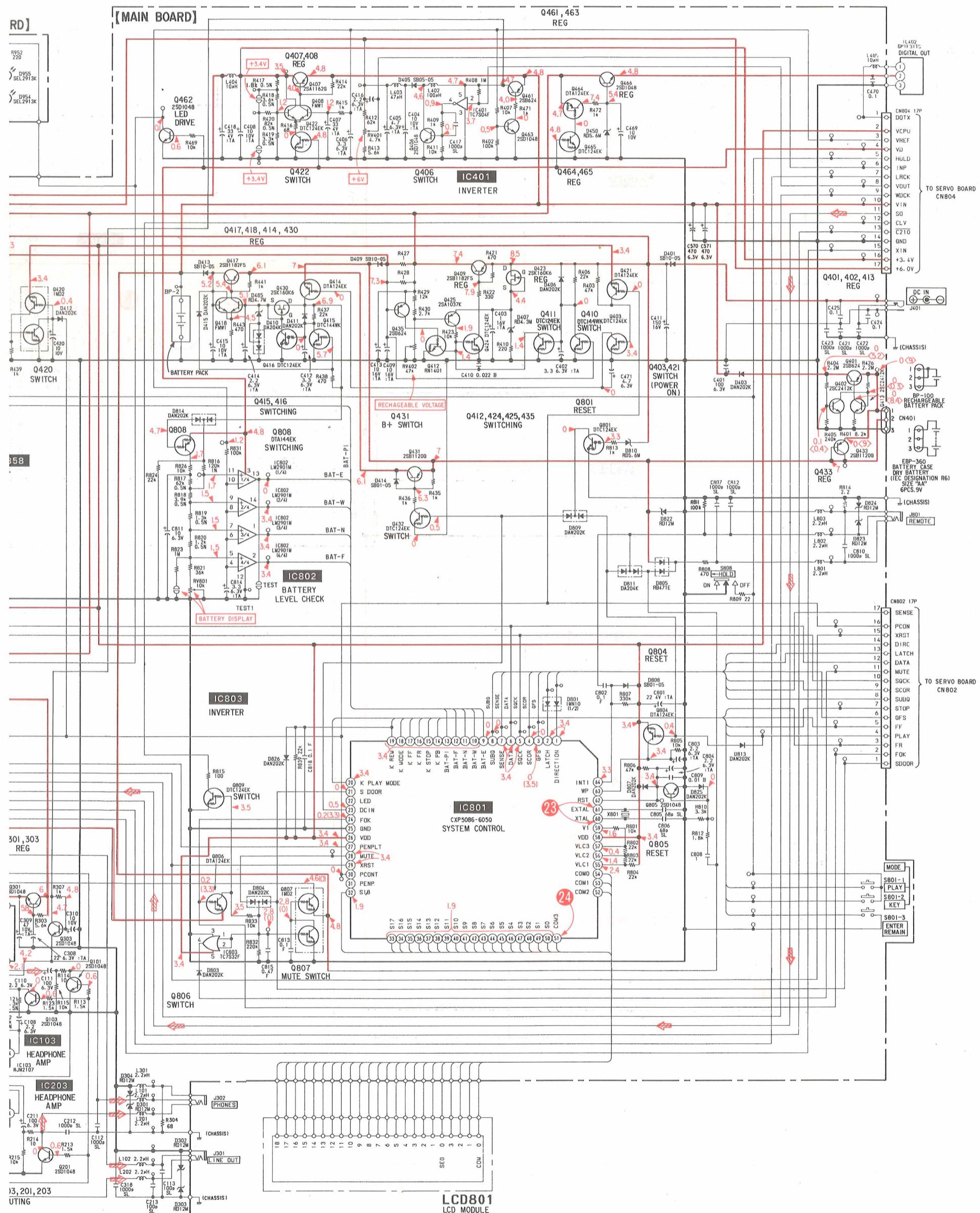
- All capacitors are in μF unless otherwise noted. pF : $\mu\mu\text{F}$ 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $1/4\text{W}$ or less unless otherwise specified.
- % : indicates tolerance.

Note: The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.

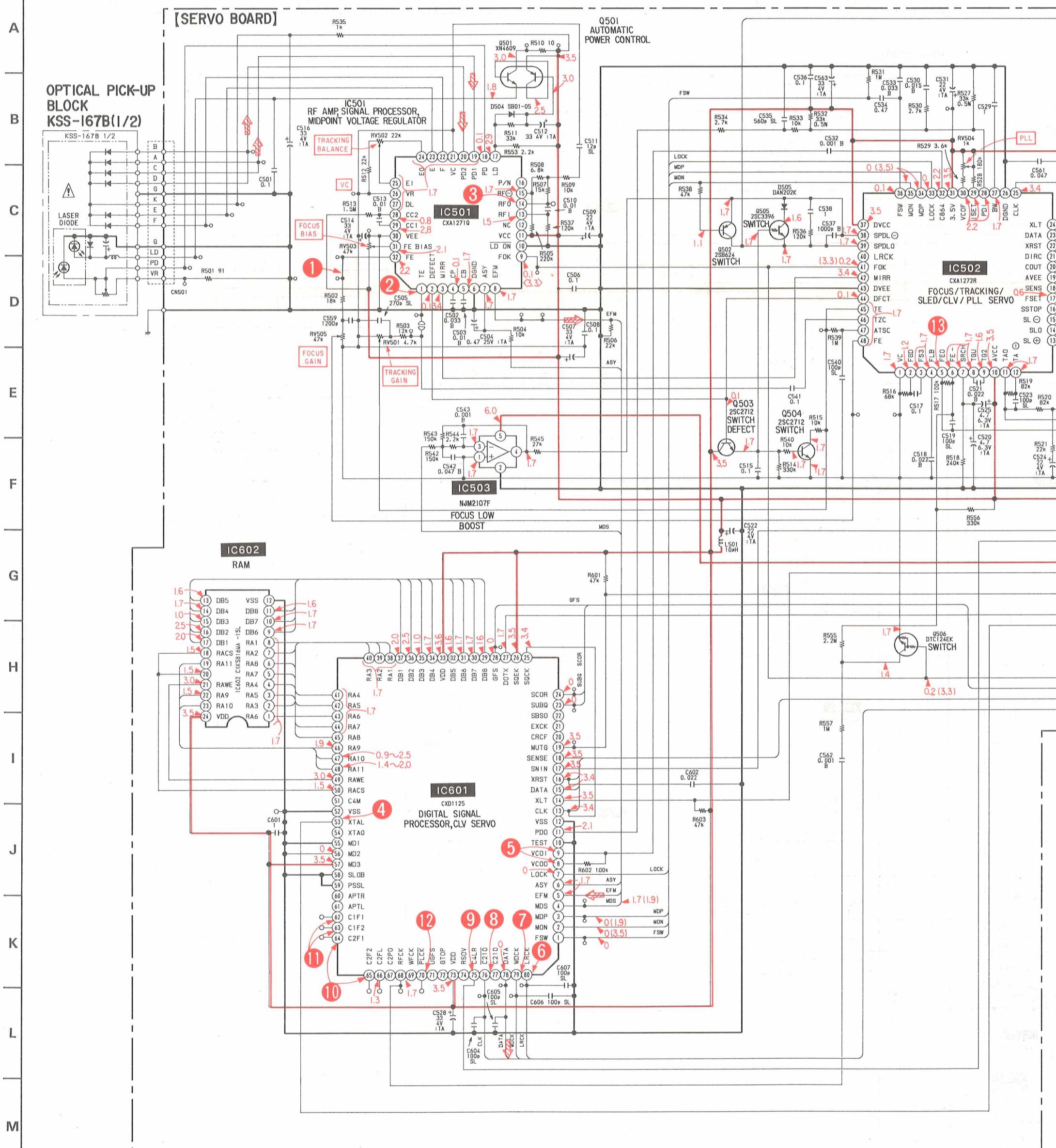
- Power voltage is dc 9V and fed with regulated dc power supply from external power voltage jack.
no mark: stop
(): play
< >: values when a power supply of 9V dc supplied from the battery terminal.
- Voltages are taken with a VOM (Input impedance $10M\Omega$).
- Circled numbers refer to waveforms.
- Signal path.

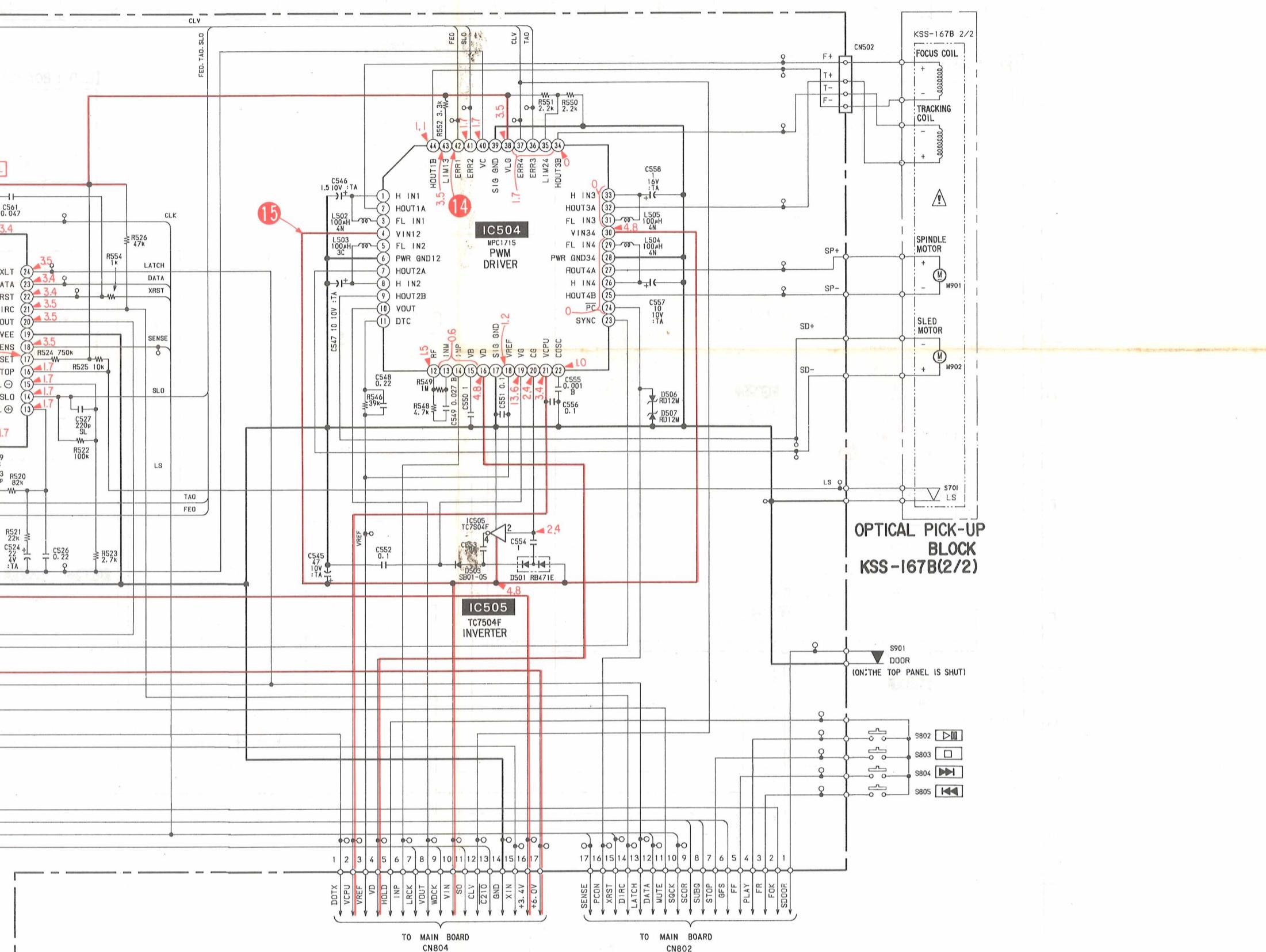
 CD

10 11 12 13 14 15 16 17 18 19 20



1 2 3 4 5 6 7 8 9 10 11





Note:

- All capacitors are in μF unless otherwise noted. pF: $\mu\mu\text{F}$ 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $1/4\text{W}$ or less unless otherwise specified.
- % : indicates tolerance.

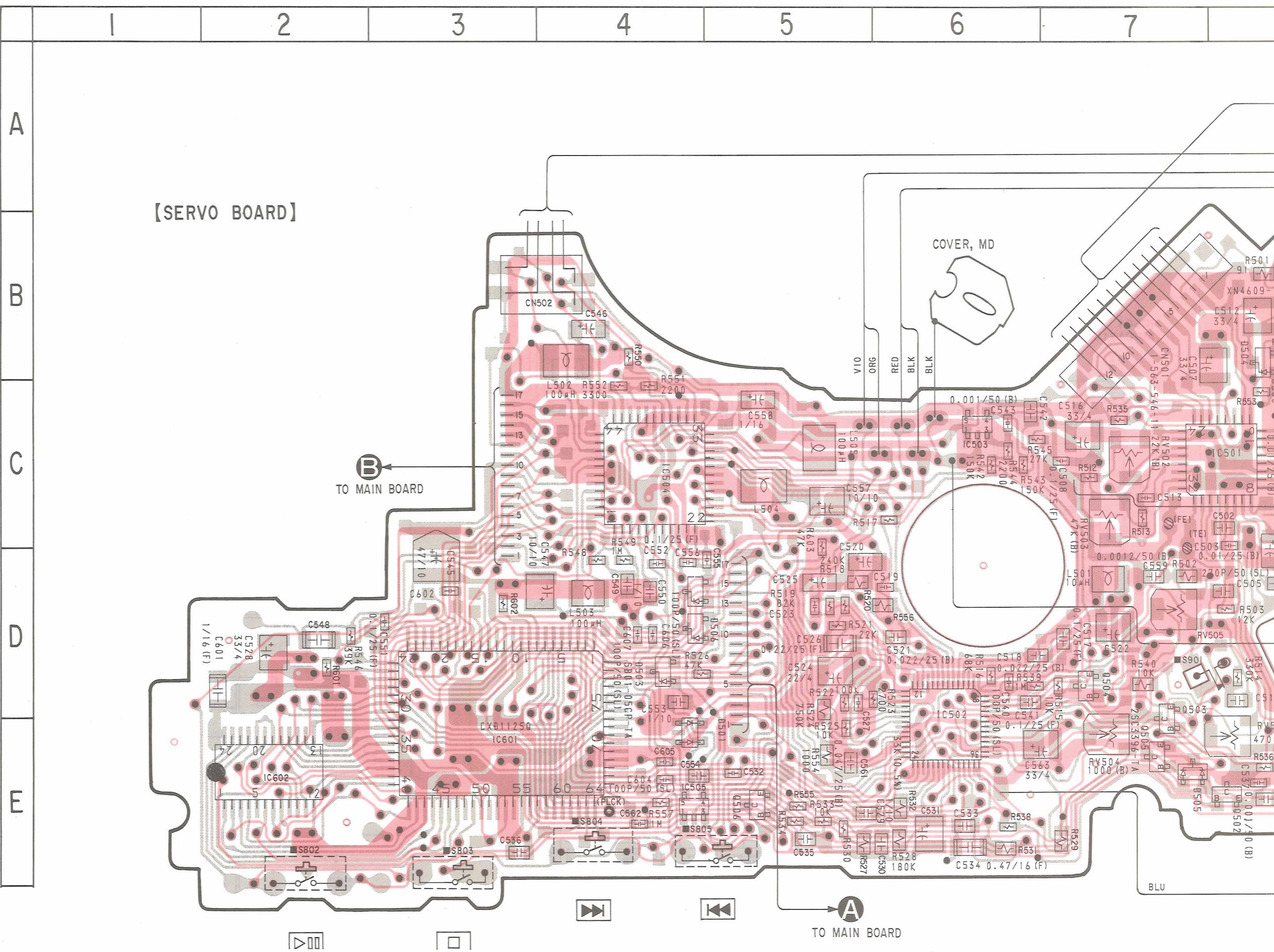
Note: The components identified by mark \triangle or dotted line with mark \triangle are critical for safety. Replace only with part number specified.

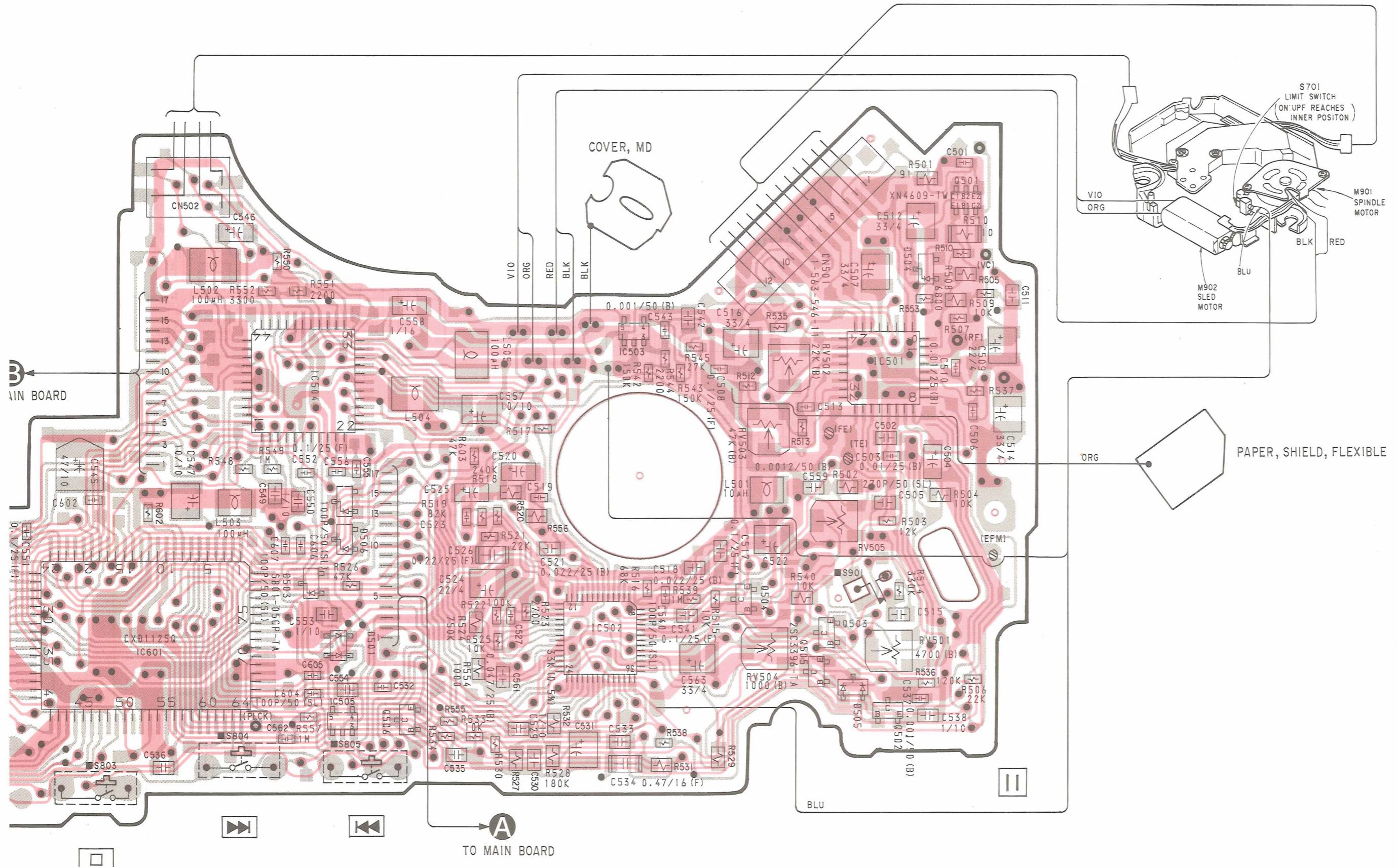
- : B+ Line
- : adjustment for repair.
- Power voltage is dc 9V and fed with regulated dc power supply from external power voltage jack.
 - no mark: stop
 - (): play
 - < >: values when a power supply of 9V dc supplied from the battery terminal.
- Voltages are taken with a VOM (Input impedance $10M\Omega$).
- Circle numbers refer to waveforms.
- Signal path.
- : CD

- Semiconductor Location

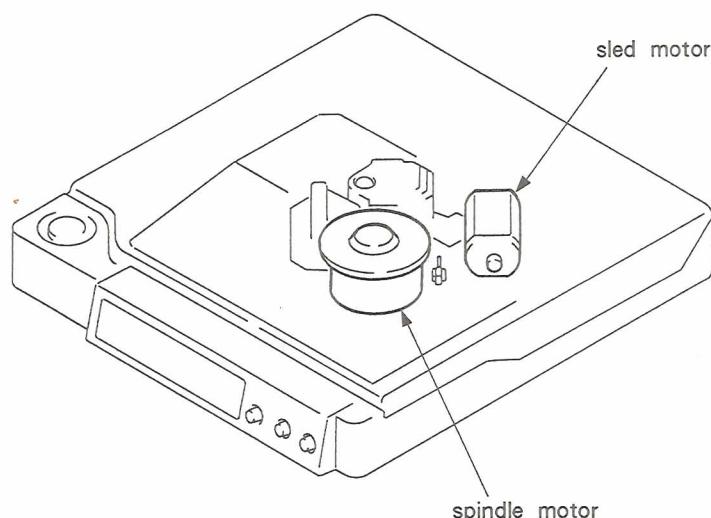
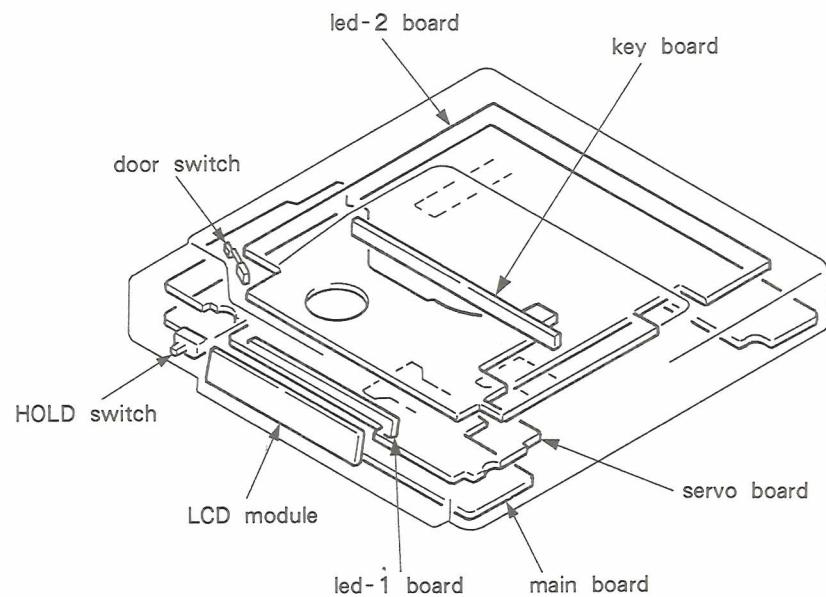
Ref. No.	Location
D501	E- 4
D503	D- 4
D504	B- 8
D505	E- 7
D506	D- 4
D507	D- 4
IC501	C- 8
IC502	D- 6
IC503	C- 6
IC504	C- 4
IC505	E- 4
IC601	D- 3
IC602	E- 2
Q501	B- 8
Q502	E- 8
Q503	D- 7
Q504	D- 7
Q505	E- 7
Q506	E- 5

- : Through hole.
- : Pattern on the side which is seen.
- : Pattern of the rear side.





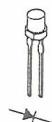
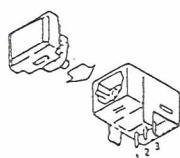
- CIRCUIT BOARD LOCATION



- Semiconductor Lead Layouts

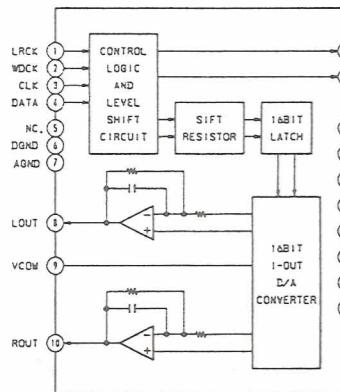
GP1F31T

SEL2913K-D

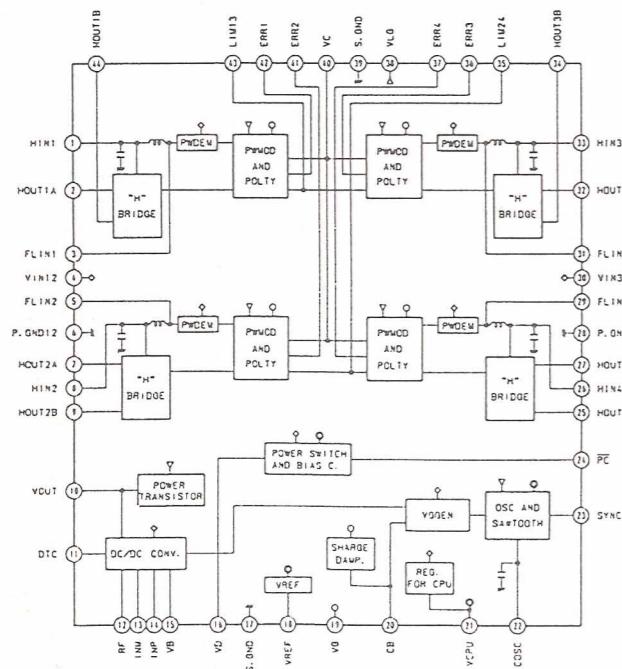


4-7. IC BLOCK DIAGRAM

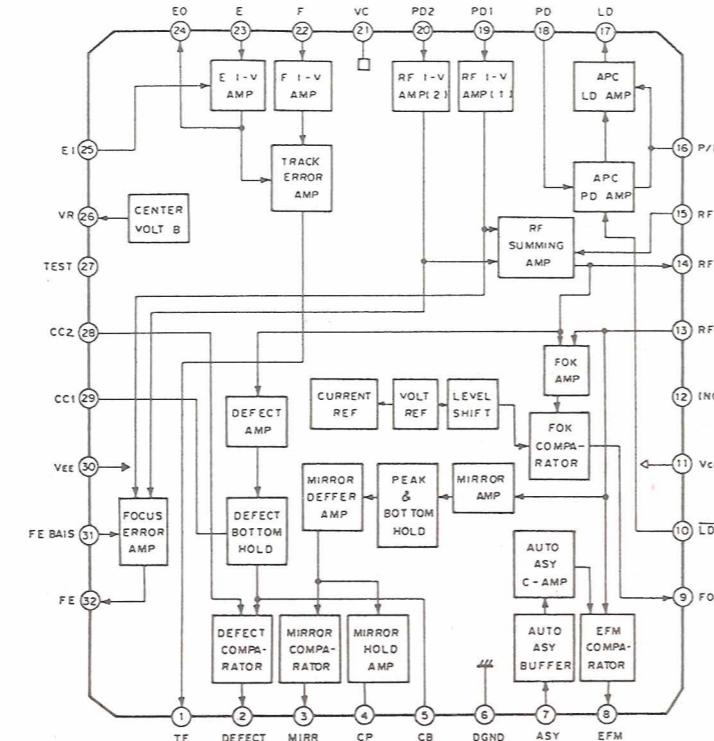
IC101, 201
PCM-66PJ



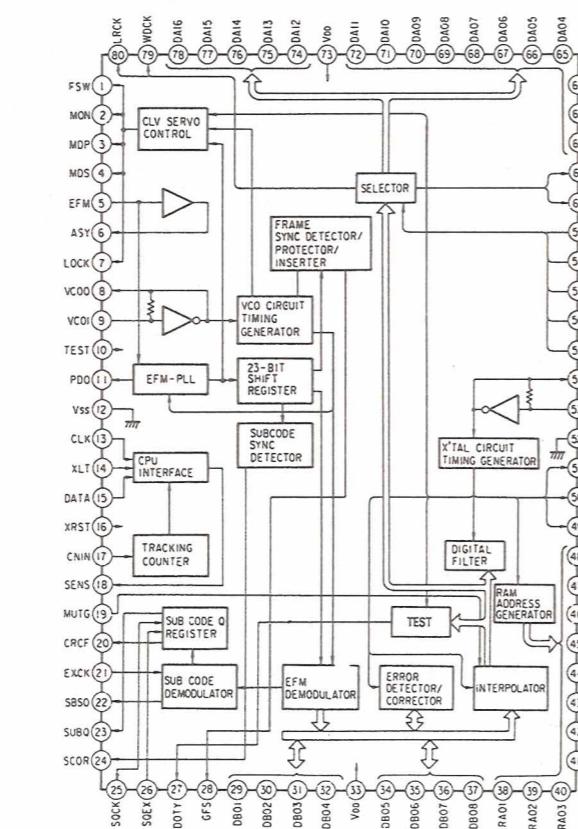
IC504
MPC1715



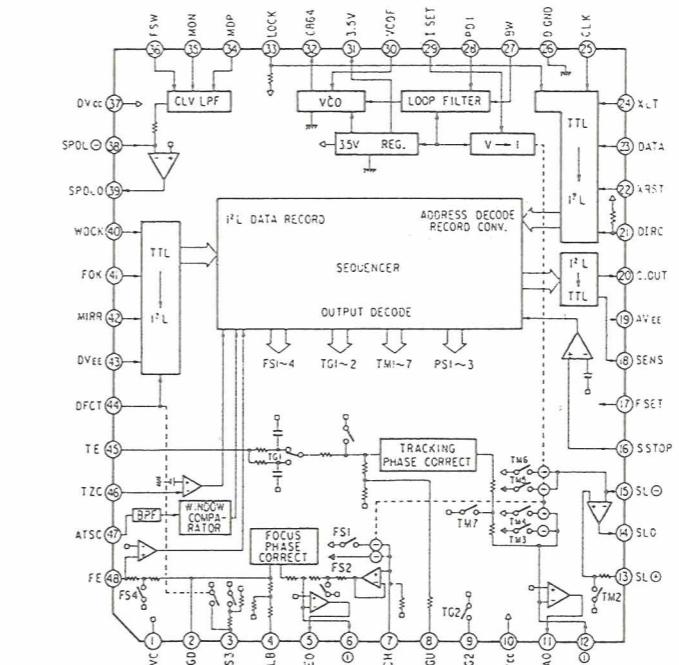
IC501
CXA1271Q



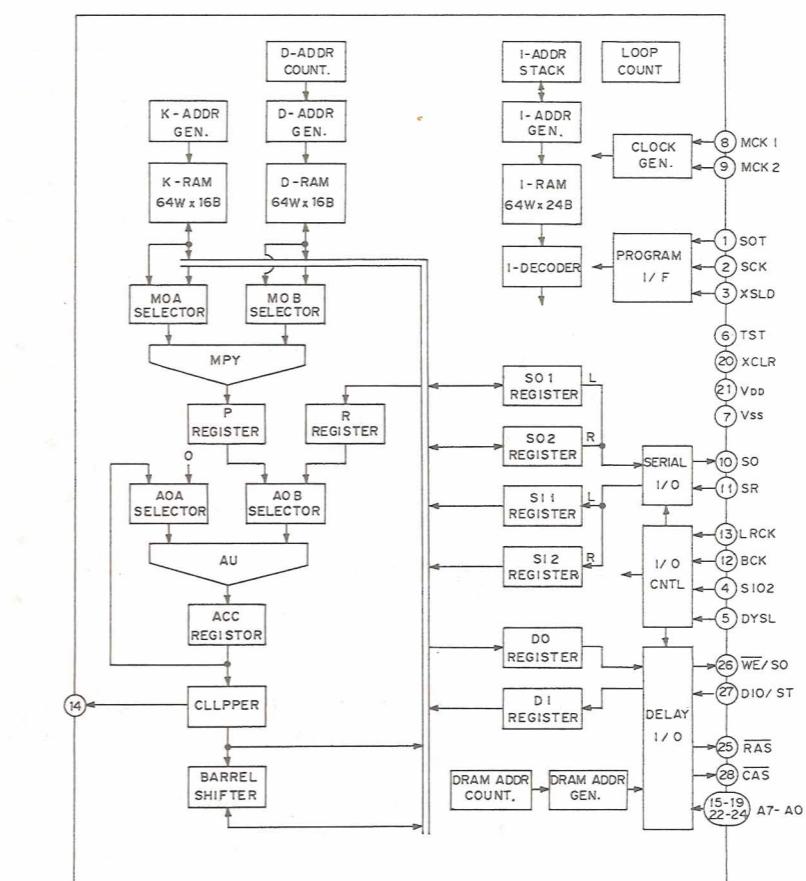
IC601
CXD1125Q



IC502
CXA1272



IC301
CXD1160



SECTION 5

EXPLODED VIEWS

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked “★” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

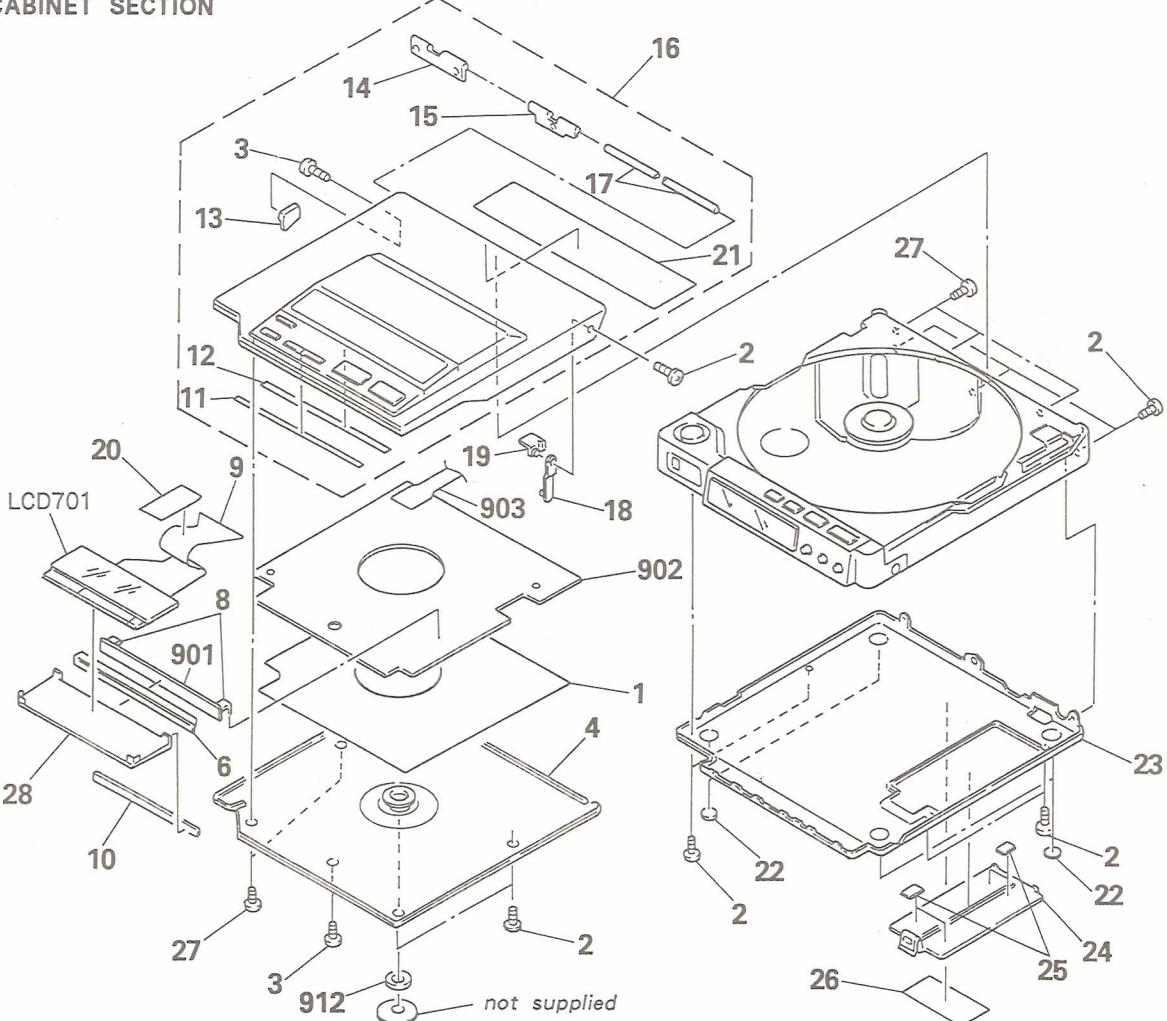
- Due to standardization, parts with part number suffix -XX and -X may be different from the parts specified in the components used on the set.

- Color Indication of Appearance Parts

Example:
(PDP) KNOB BALANCE (WHEEL)

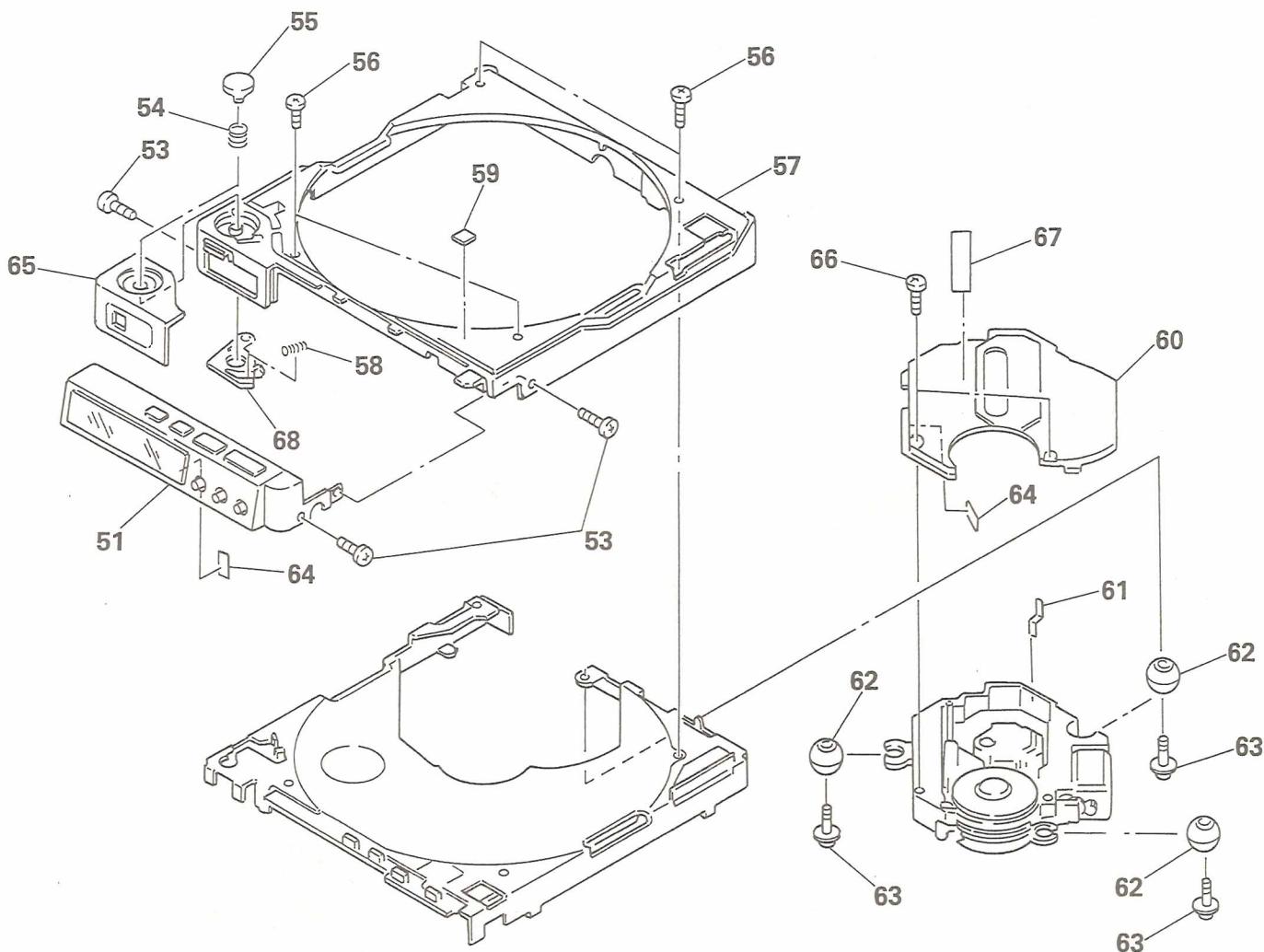
The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.

5-1. CABINET SECTION



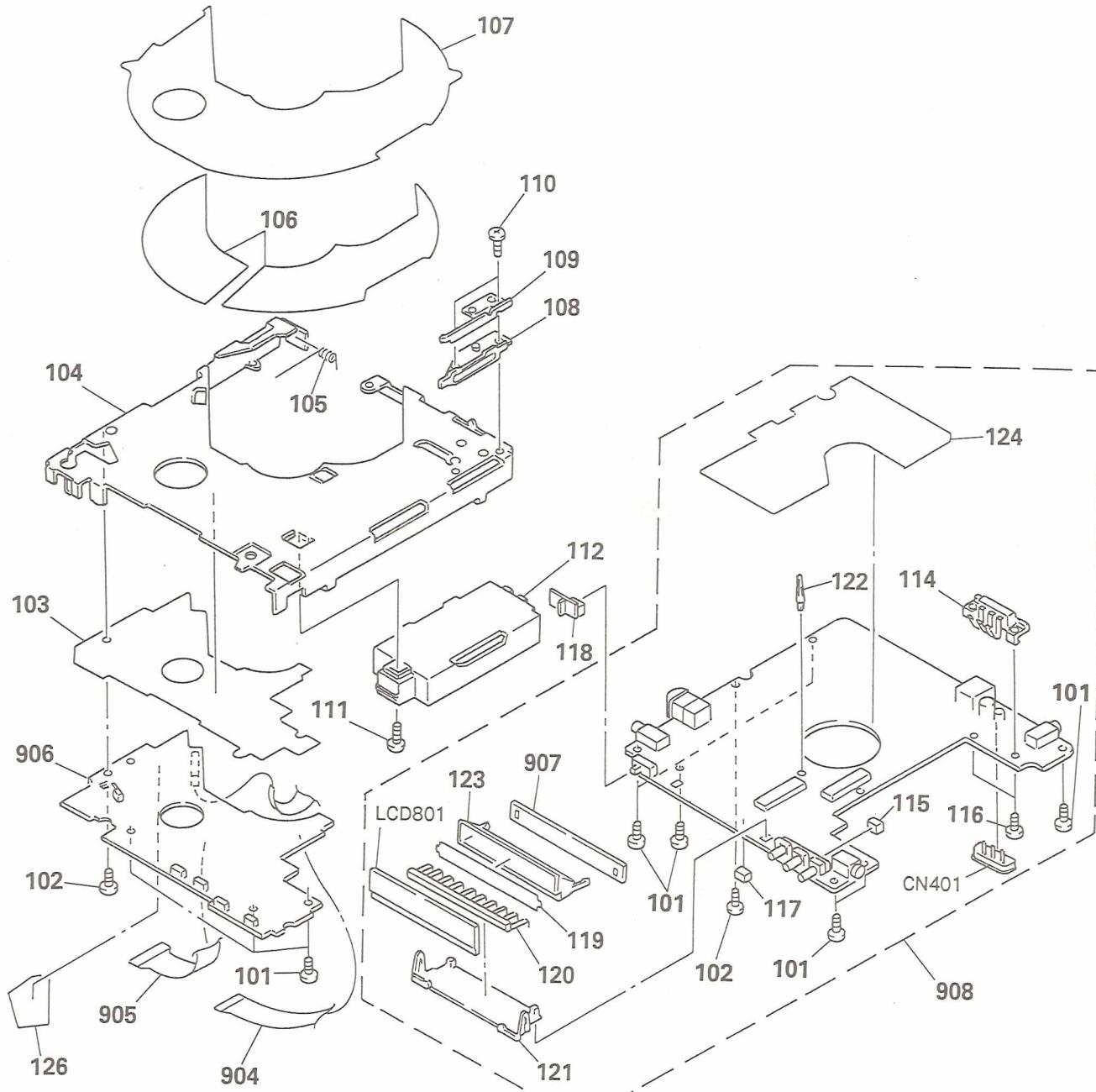
No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
1	4-924-127-01	PLATE (A), CHUCK		19	X-4917-704-1	BRACKET ASSY, SWITCHING PLATE	
2	3-703-816-72	SCREW (M.4X3.0), SPECIAL HEAD		20	*4-926-115-01	CUSHION (P)	
3	3-895-823-41	SCREW (B1.4X4), TAPPING		21	*4-932-714-01	SHEET (UPPER LID), INSULATING	
4	A-3043-251-A	COVER (LID) ASSY		22	4-912-641-01	FOOT, RUBBER	
6	*4-926-163-01	HOLDER (T-LED)		23	X-4921-243-1	PANEL ASSY, BOTTOM	
8	4-926-167-01	TERMINAL BOARD (LED)		24	4-926-185-01	LID, BATTERY CASE	
9	*4-932-718-01	SPACER (LCD FLEXIBLE)		25	3-831-441-XX	CUSHION	
10	*4-932-707-01	SHEET (DIFFUSION T)		26	*4-926-188-01	(US).....LABEL, MODEL NUMBER (U)	
					*4-932-712-01	(AEP,FRENCH,UK,E)...LABEL, MODEL NUMBER	
11	4-926-172-01	SHEET (F), ADHESIVE		27	3-703-816-02	SCREW (M.4X2.0), SPECIAL HEAD	
12	4-932-794-01	SHEET (M), ADHESIVE		28	X-4921-249-1	PLATE (T) ASSY, LIGHT GUIDE	
13	4-920-272-01	RETAINER, SPRING, SWITCHING		901	*1-631-515-11	PC BOARD, LED-2	
14	4-924-143-01	HINGE (RIGHT)		902	*1-631-516-12	PC BOARD, KEY	
15	4-924-142-01	HINGE (LEFT)		903	*1-632-626-11	PC BOARD, KEY FLEXIBLE	
16	A-3043-250-A	PLATE ASSY, TRANSPARENT		912	1-452-473-11	MAGNET	
17	4-924-144-01	SHAFT, FULCRUM		LCD701	1-808-771-11	DISPLAY PANEL, LIQUID CRYSTAL	
18	X-4921-216-1	PLATE (B) ASSY, SWITCHING					

5-2. CHASSIS SECTION (1)

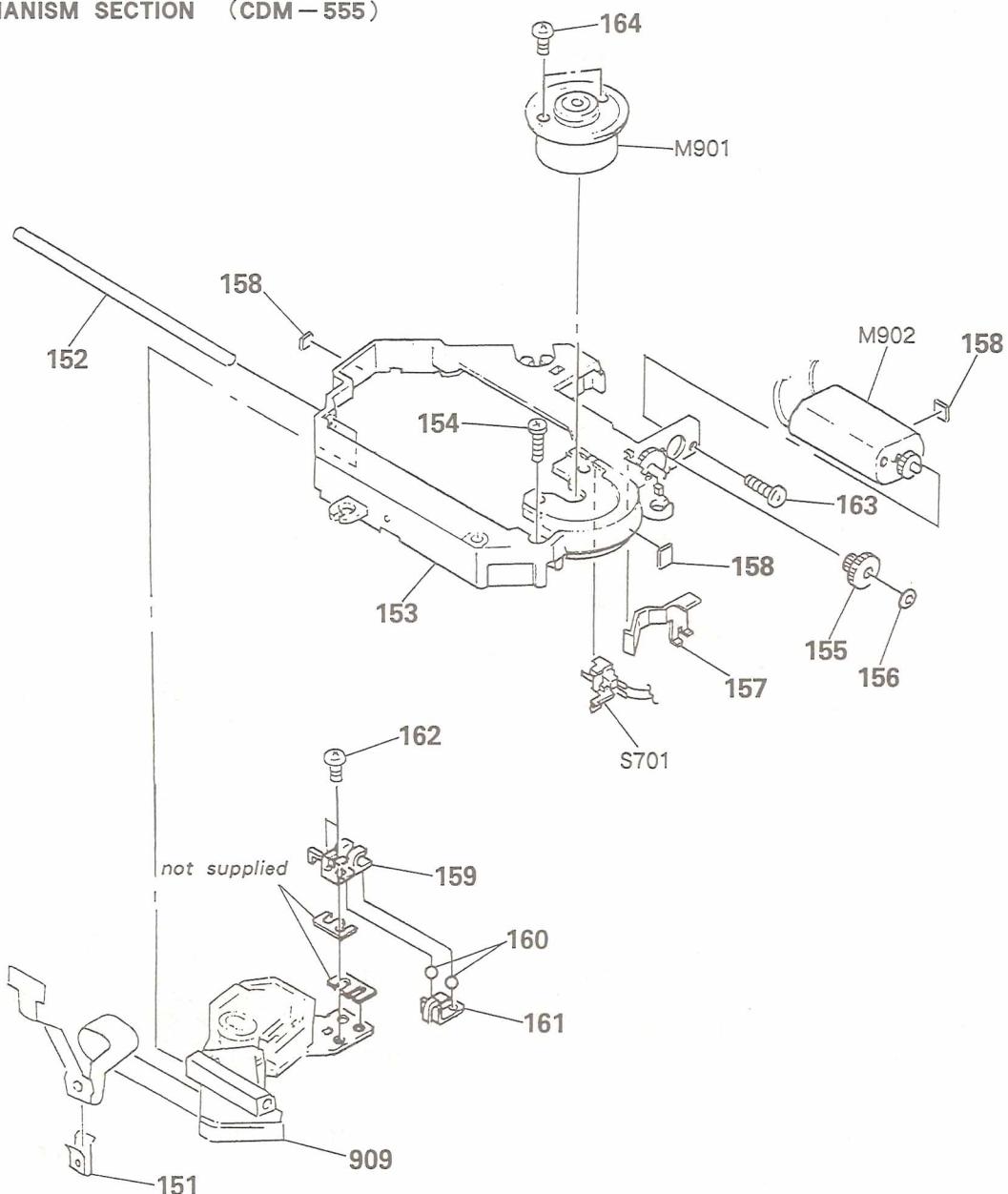


No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
51	X-4921-245-1	PANEL (M) ASSY, FRONT		60	4-926-141-01	COVER, MD	
53	3-703-816-72	SCREW (M1.4X3.0), SPECIAL HEAD		61	3-831-441-XX	CUSHION	
54	4-917-727-01	SPRING, COMPRESSION		62	X-4917-723-1	DAMPER	
55	4-924-130-31	BUTTON, OPEN		63	4-920-209-01	SCREW (INSULATOR), STEP	
56	3-703-816-22	SCREW (M1.4X5.0), SPECIAL HEAD		64	9-911-838-XX	CUSHION	
57	4-926-177-01	CABINET		65	X-4921-248-1	PANEL (AL) ASSY, FRONT	
58	4-924-140-01	SPRING, COMPRESSION		66	3-895-823-41	SCREW (B1.4X4), TAPPING	
59	*4-932-708-11	CUSHION (UPPER LID)		67	4-908-711-01	LABEL, CAUTION, LENS	
				68	4-926-161-01	LEVER, LOCK	

5-3. CHASSIS SECTION (2)



5-4. MECHANISM SECTION (CDM-555)



Note: The components identified by mark or dotted line with mark are critical for safety. Replace only with part number specified.

No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
151	4-917-622-01	RETAINER, FLEXIBLE		160	7-671-111-11	STEEL, BOL 1.5MM	
152	4-917-611-01	SHAFT (A)		161	4-921-296-01	SPRING	
153	X-4917-609-1	CHASSIS ASSY, MD		162	7-627-552-38	SCREW, PRECISION +P 1.7X3	
154	4-921-299-01	SCREW (1.7X8), SPECIAL		163	7-627-553-38	SCREW, PRECISION +P 2X3	
155	4-921-292-01	GEAR (B)		164	7-627-552-08	SCREW, PRECISION +P 1.7X2.5	
156	3-315-384-11	WASHER, STOPPER		909	△8-848-141-11	DEVICE, OPTICAL KSS-167B (RP)	
157	4-921-290-01	SPRING		M901	A-3133-384-A	MOTOR ASSY, CLV	
158	*3-880-474-11	CUSHION, 15X5X0.3		M902	A-3133-334-A	MOTOR SUB ASSY, FEED	
159	4-921-294-01	RACK (A)		S701	1-571-099-11	SWITCH (LIMIT)	

SECTION 6

ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked “★” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:
MF: μ F, PF: $\mu\mu$ F.

RESISTORS

- All resistors are in ohms.
- F: nonflammable

COILS

- MMH: mH, UH: μ H

SEMICONDUCTORS

In each case, U: μ , for example:
UA...: μ A..., UPA...: μ PA...,
UPC...: μ PC, UPD...: μ PD...

The components identified by mark  or dotted line with mark  are critical for safety.
Replace only with part number specified.

Ref.No.	Part No.	Description		Ref.No.	Part No.	Description	
901	*1-631-515-11	PC BOARD, LED-2		C312	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V
902	*1-631-516-12	PC BOARD, KEY		C313	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V
903	*1-632-626-11	PC BOARD, KEY FLEXIBLE		C315	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
904	1-631-518-11	PC BOARD, FLEXIBLE		C317	1-135-174-11	TANTAL. CHIP 10MF	20% 10V
905	1-631-517-11	PC BOARD, FLEXIBLE		C318	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V
906	A-3015-778-A	PC BOARD ASSY, SERVO		C401	1-126-206-11	ELECT CHIP 100MF	20% 6.3V
907	*1-631-514-11	PC BOARD, LED-1		C402	1-135-150-21	TANTAL. CHIP 3.3MF	20% 6.3V
908	A-3015-777-A	PC BOARD ASSY, MAIN		C403	1-135-091-00	TANTAL. CHIP 1MF	20% 16V
909	△8-848-141-11	DEVICE, OPTICAL KSS-167B (RP)		C404	1-135-174-11	TANTAL. CHIP 10MF	20% 10V
912	1-452-473-11	MAGNET		C405	1-135-130-11	TANTAL. CHIP 4.7MF	20% 6.3V
C101	1-135-144-11	TANTAL. CHIP 22MF	20% 6.3V	C406	1-135-150-21	TANTAL. CHIP 3.3MF	20% 6.3V
C102	1-135-144-11	TANTAL. CHIP 22MF	20% 6.3V	C407	1-135-162-21	TANTAL. CHIP 33MF	20% 4V
C103	1-135-162-21	TANTAL. CHIP 33MF	20% 4V	C408	1-135-174-11	TANTAL. CHIP 10MF	20% 10V
C104	1-163-105-00	CERAMIC CHIP 33PF	5% 50V	C409	1-135-159-21	TANTAL. CHIP 10MF	20% 16V
C105	1-163-133-00	CERAMIC CHIP 470PF	5% 50V	C410	1-163-037-11	CERAMIC CHIP 0.022MF	10% 25V
C106	1-135-149-21	TANTAL. CHIP 2.2MF	20% 6.3V	C411	1-126-357-11	ELECT 150MF	20% 16V
C107	1-135-130-11	TANTAL. CHIP 4.7MF	20% 6.3V	C412	1-135-150-21	TANTAL. CHIP 3.3MF	20% 6.3V
C108	1-135-149-21	TANTAL. CHIP 2.2MF	20% 6.3V	C413	1-135-159-21	TANTAL. CHIP 10MF	20% 16V
C110	1-135-149-21	TANTAL. CHIP 2.2MF	20% 6.3V	C414	1-135-149-21	TANTAL. CHIP 2.2MF	20% 6.3V
C111	1-126-206-11	ELECT CHIP 100MF	20% 6.3V	C415	1-135-174-11	TANTAL. CHIP 10MF	20% 10V
C112	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V	C416	1-135-149-21	TANTAL. CHIP 2.2MF	20% 6.3V
C113	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C417	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V
C114	1-163-129-00	CERAMIC CHIP 330PF	5% 50V	C418	1-135-162-21	TANTAL. CHIP 33MF	20% 4V
C201	1-135-144-11	TANTAL. CHIP 22MF	20% 6.3V	C420	1-135-174-11	TANTAL. CHIP 10MF	20% 10V
C202	1-135-144-11	TANTAL. CHIP 22MF	20% 6.3V	C421	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V
C203	1-135-162-21	TANTAL. CHIP 33MF	20% 4V	C422	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V
C204	1-163-105-00	CERAMIC CHIP 33PF	5% 50V	C423	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V
C205	1-163-133-00	CERAMIC CHIP 470PF	5% 50V	C424	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C206	1-135-149-21	TANTAL. CHIP 2.2MF	20% 6.3V	C425	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C207	1-135-130-11	TANTAL. CHIP 4.7MF	20% 6.3V	C469	1-135-174-11	TANTAL. CHIP 10MF	20% 10V
C208	1-135-149-21	TANTAL. CHIP 2.2MF	20% 6.3V	C470	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C210	1-135-149-21	TANTAL. CHIP 2.2MF	20% 6.3V	C471	1-135-181-21	TANTAL. CHIP 4.7MF	20% 6.3V
C211	1-126-206-11	ELECT CHIP 100MF	20% 6.3V	C501	1-164-156-11	CERAMIC CHIP 0.1MF	25V
C212	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V	C502	1-163-989-11	CERAMIC CHIP 0.033MF	10% 25V
C213	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C503	1-162-970-11	CERAMIC CHIP 0.01MF	10% 25V
C214	1-163-129-00	CERAMIC CHIP 330PF	5% 50V	C504	1-135-145-11	TANTAL. CHIP 0.47MF	20% 25V
C301	1-163-095-00	CERAMIC CHIP 12PF	5% 50V	C505	1-163-127-00	CERAMIC CHIP 270PF	5% 50V
C302	1-163-095-00	CERAMIC CHIP 12PF	5% 50V	C506	1-164-156-11	CERAMIC CHIP 0.1MF	25V
C303	1-135-157-21	TANTAL. CHIP 22MF	20% 4V	C507	1-135-162-21	TANTAL. CHIP 33MF	20% 4V
C304	1-135-144-11	TANTAL. CHIP 22MF	20% 6.3V	C508	1-164-156-11	CERAMIC CHIP 0.1MF	25V
C305	1-135-144-11	TANTAL. CHIP 22MF	20% 6.3V	C509	1-135-157-21	TANTAL. CHIP 22MF	20% 4V
C306	1-135-144-11	TANTAL. CHIP 22MF	20% 6.3V	C510	1-162-970-11	CERAMIC CHIP 0.01MF	10% 25V
C308	1-135-144-11	TANTAL. CHIP 22MF	20% 6.3V	C511	1-163-095-00	CERAMIC CHIP 12PF	5% 50V
C309	1-135-206-11	TANTAL. CHIP 47MF	20% 10V	C512	1-135-162-21	TANTAL. CHIP 33MF	20% 4V
C310	1-135-174-11	TANTAL. CHIP 10MF	20% 10V	C513	1-162-970-11	CERAMIC CHIP 0.01MF	10% 25V
C311	1-162-953-11	CERAMIC CHIP 100PF	5% 50V				

Ref. No.	Part No.	Description			Ref. No.	Part No.	Description		
C514	1-135-162-21	TANTAL. CHIP 33MF	20%	4V	C803	1-135-149-21	TANTAL. CHIP 2.2MF	20%	6.3V
C515	1-163-038-00	CERAMIC CHIP 0.1MF		25V	C804	1-135-149-21	TANTAL. CHIP 2.2MF	20%	6.3V
C516	1-135-162-21	TANTAL. CHIP 33MF	20%	4V	C805	1-162-951-11	CERAMIC CHIP 68PF	5%	50V
C517	1-163-038-00	CERAMIC CHIP 0.1MF		25V	C806	1-162-951-11	CERAMIC CHIP 68PF	5%	50V
C518	1-163-037-11	CERAMIC CHIP 0.022MF	10%	25V	C807	1-163-141-00	CERAMIC CHIP 0.001MF	5%	50V
C519	1-162-953-11	CERAMIC CHIP 100PF	5%	50V	C808	1-162-638-11	CERAMIC CHIP 1MF		16V
C520	1-135-181-21	TANTAL. CHIP 4.7MF	20%	6.3V	C809	1-162-970-11	CERAMIC CHIP 0.01MF	10%	25V
C521	1-163-037-11	CERAMIC CHIP 0.022MF	10%	25V	C810	1-163-141-00	CERAMIC CHIP 0.001MF	5%	50V
C522	1-135-157-21	TANTAL. CHIP 22MF	20%	4V	C811	1-135-157-21	TANTAL. CHIP 10MF	20%	6.3V
C523	1-162-953-11	CERAMIC CHIP 100PF	5%	50V	C812	1-163-141-00	CERAMIC CHIP 0.001MF	5%	50V
C524	1-135-157-21	TANTAL. CHIP 22MF	20%	4V	C813	1-163-038-00	CERAMIC CHIP 0.1MF		25V
C525	1-135-181-21	TANTAL. CHIP 4.7MF	20%	6.3V	C814	1-135-150-21	TANTAL. CHIP 3.3MF	20%	6.3V
C526	1-163-081-00	CERAMIC CHIP 0.22MF		25V	C815	1-162-637-11	CERAMIC CHIP 0.47MF		16V
C527	1-162-957-11	CERAMIC CHIP 220PF	5%	50V	C818	1-163-038-00	CERAMIC CHIP 0.1MF		25V
C528	1-135-162-21	TANTAL. CHIP 33MF	20%	4V	C851	1-163-113-00	CERAMIC CHIP 68PF	5%	50V
C529	1-164-234-11	CERAMIC CHIP 1MF		10V	C852	1-163-113-00	CERAMIC CHIP 68PF	5%	50V
C530	1-163-023-00	CERAMIC CHIP 0.015MF	10%	50V	C853	1-135-157-21	TANTAL. CHIP 22MF	20%	4V
C531	1-135-157-21	TANTAL. CHIP 22MF	20%	4V	C854	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C532	1-162-964-11	CERAMIC CHIP 0.001MF	10%	50V	C855	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C533	1-163-989-11	CERAMIC CHIP 0.033MF	10%	25V	C856	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C534	1-162-637-11	CERAMIC CHIP 0.47MF		16V	CN401	1-535-608-21	TERMINAL, BATTERY		
C535	1-163-135-00	CERAMIC CHIP 560PF	5%	50V	CN501	1-563-546-11	HOUSING, CONNECTOR 12P		
C536	1-163-038-00	CERAMIC CHIP 0.1MF		25V	CN502	1-568-290-11	SOCKET, CONNECTOR 4P		
C537	1-162-964-11	CERAMIC CHIP 0.001MF	10%	50V	CN802	*1-566-533-11	CONNECTOR, FPC (ZIF) 17P		
C538	1-164-234-11	CERAMIC CHIP 1MF		10V	CN804	*1-566-533-11	CONNECTOR, FPC (ZIF) 17P		
C540	1-162-953-11	CERAMIC CHIP 100PF	5%	50V	CN805	1-566-531-11	CONNECTOR, FPC (ZIF) 15P		
C541	1-163-038-00	CERAMIC CHIP 0.1MF		25V	D301	8-719-106-70	DIODE RD12M2B1		
C542	1-163-809-11	CERAMIC CHIP 0.047MF	10%	25V	D302	8-719-106-70	DIODE RD12M2B1		
C543	1-162-964-11	CERAMIC CHIP 0.001MF	10%	50V	D303	8-719-106-70	DIODE RD12M2B1		
C545	1-135-206-11	TANTAL. CHIP 47MF	20%	10V	D304	8-719-106-70	DIODE RD12M2B1		
C546	1-135-148-21	TANTAL. CHIP 1.5MF	10%	10V	D305	8-719-951-22	DIODE IMN10T108		
C547	1-135-174-11	TANTAL. CHIP 10MF	20%	10V	D401	8-719-975-34	DIODE RB110C-T100		
C548	1-163-081-00	CERAMIC CHIP 0.22MF		25V	D403	8-719-400-18	DIODE MA152WK		
C549	1-163-986-00	CERAMIC CHIP 0.027MF	10%	25V	D405	8-719-975-42	DIODE RB411D-T97		
C550	1-164-234-11	CERAMIC CHIP 1MF		10V	D406	8-719-400-18	DIODE MA152WK		
C551	1-164-156-11	CERAMIC CHIP 0.1MF		25V	D407	8-719-105-63	DIODE RD4.3MB1		
C552	1-164-156-11	CERAMIC CHIP 0.1MF		25V	D409	8-719-975-34	DIODE RB110C-T100		
C553	1-164-234-11	CERAMIC CHIP 1MF		10V	D410	8-719-800-76	DIODE 1SS226		
C554	1-164-234-11	CERAMIC CHIP 1MF		10V	D411	8-719-400-18	DIODE MA152WK		
C555	1-162-964-11	CERAMIC CHIP 0.001MF	10%	50V	D412	8-719-400-18	DIODE MA152WK		
C556	1-164-156-11	CERAMIC CHIP 0.1MF		25V	D413	8-719-975-34	DIODE RB110C-T100		
C557	1-135-174-11	TANTAL. CHIP 10MF	20%	10V	D414	8-719-938-72	DIODE SB01-05CP		
C558	1-135-091-00	TANTAL. CHIP 1MF	20%	16V	D415	8-719-400-18	DIODE MA152WK		
C559	1-163-010-11	CERAMIC CHIP 0.0012MF	10%	50V	D450	8-719-105-91	DIODE RD5.6MB2		
C561	1-163-809-11	CERAMIC CHIP 0.047MF	10%	25V	D485	8-719-105-72	DIODE RD4.7MB1		
C562	1-162-964-11	CERAMIC CHIP 0.001MF	10%	50V	D501	8-719-975-46	DIODE RB471E		
C563	1-135-162-21	TANTAL. CHIP 33MF	20%	4V	D503	8-719-938-72	DIODE SB01-05CP		
C570	1-126-114-11	ELECT 470MF	20%	6.3V	D504	8-719-938-72	DIODE SB01-05CP		
C571	1-126-114-11	ELECT 470MF	20%	6.3V	D505	8-719-400-18	DIODE MA152WK		
C601	1-162-638-11	CERAMIC CHIP 1MF		16V	D506	8-719-106-70	DIODE RD12M-B1		
C602	1-162-995-11	CERAMIC CHIP 0.022MF		50V	D507	8-719-106-70	DIODE RD12M-B1		
C604	1-162-953-11	CERAMIC CHIP 100PF	5%	50V	D801	8-719-951-22	DIODE IMN10T108		
C605	1-162-953-11	CERAMIC CHIP 100PF	5%	50V	D803	8-719-400-18	DIODE MA152WK		
C606	1-162-953-11	CERAMIC CHIP 100PF	5%	50V	D804	8-719-400-18	DIODE MA152WK		
C607	1-162-953-11	CERAMIC CHIP 100PF	5%	50V	D805	8-719-975-46	DIODE RB471E		
C801	1-135-157-21	TANTAL. CHIP 22MF	20%	4V	D807	8-719-400-18	DIODE MA152WK		
C802	1-163-038-00	CERAMIC CHIP 0.1MF		25V					

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
D808	8-719-938-72	DIODE SB01-05CP	JR301	1-216-295-00	METAL GLAZE 0 5% 1/10W
D809	8-719-400-18	DIODE MA152WK	JR302	1-216-864-11	METAL GLAZE 0 5% 1/16W
D810	8-719-105-91	DIODE RD5.6MB2	JR303	1-216-295-00	METAL GLAZE 0 5% 1/10W
D811	8-719-800-76	DIODE 1SS226	JR801	1-216-296-00	METAL GLAZE 0 5% 1/8W
D813	8-719-400-18	DIODE MA152WK	JR802	1-216-296-00	METAL GLAZE 0 5% 1/8W
D814	8-719-400-18	DIODE MA152WK	JR803	1-216-864-11	METAL GLAZE 0 5% 1/16W
D822	8-719-106-70	DIODE RD12MB1	JR804	1-216-295-00	METAL GLAZE 0 5% 1/10W
D823	8-719-106-70	DIODE RD12MB1	L101	1-410-997-31	INDUCTOR CHIP 2.2UH
D824	8-719-106-70	DIODE RD12MB1	L102	1-410-997-31	INDUCTOR CHIP 2.2UH
D825	8-719-400-18	DIODE MA152WK	L201	1-410-997-31	INDUCTOR CHIP 2.2UH
D826	8-719-400-18	DIODE MA152WK	L202	1-410-997-31	INDUCTOR CHIP 2.2UH
D901	8-719-302-88	DIODE SEL2913K-D	L301	1-410-997-31	INDUCTOR CHIP 2.2UH
D902	8-719-302-88	DIODE SEL2913K-D	L402	1-412-039-51	INDUCTOR CHIP 100UH
D903	8-719-302-88	DIODE SEL2913K-D	L403	1-412-031-11	INDUCTOR CHIP 47UH
D904	8-719-302-88	DIODE SEL2913K-D	L404	1-412-029-11	INDUCTOR CHIP 10UH
D905	8-719-302-88	DIODE SEL2913K-D	L405	1-412-029-11	INDUCTOR CHIP 10UH
D906	8-719-302-88	DIODE SEL2913K-D	L501	1-412-029-11	INDUCTOR CHIP 10UH
D907	8-719-302-88	DIODE SEL2913K-D	L502	1-412-039-51	INDUCTOR CHIP 100UH
D908	8-719-302-88	DIODE SEL2913K-D	L503	1-412-032-11	INDUCTOR CHIP 100UH
D909	8-719-302-88	DIODE SEL2913K-D	L504	1-412-039-51	INDUCTOR CHIP 100UH
D910	8-719-302-88	DIODE SEL2913K-D	L505	1-412-039-51	INDUCTOR CHIP 100UH
D951	8-719-302-88	DIODE SEL2913K-D	L801	1-410-997-31	INDUCTOR CHIP 2.2UH
D952	8-719-302-88	DIODE SEL2913K-D	L802	1-410-997-31	INDUCTOR CHIP 2.2UH
D954	8-719-302-88	DIODE SEL2913K-D	L803	1-410-997-31	INDUCTOR CHIP 2.2UH
D955	8-719-302-88	DIODE SEL2913K-D	LCD701	1-808-771-11	DISPLAY PANEL, LIQUID CRYSTAL
IC101	8-759-983-82	IC PCM66P-J	LCD801	1-808-770-11	DISPLAY PANEL, LIQUID CRYSTAL
IC102	8-759-710-79	IC NJM2107F	M901	A-3133-384-A	MOTOR ASSY, CLV
IC103	8-759-710-79	IC NJM2107F	M902	A-3133-334-A	MOTOR SUB ASSY, FEED
IC201	8-759-983-82	IC PCM66P-J	Q101	8-729-921-81	TRANSISTOR 2SD1781K-QR-T97
IC202	8-759-710-79	IC NJM2107F	Q102	8-729-921-81	TRANSISTOR 2SD1781K-QR-T97
IC203	8-759-710-79	IC NJM2107F	Q103	8-729-921-81	TRANSISTOR 2SD1781K-QR-T97
IC301	8-752-332-80	IC CXD1160AQ	Q201	8-729-921-81	TRANSISTOR 2SD1781K-QR-T97
IC302	8-752-334-07	IC CXD2551M	Q202	8-729-921-81	TRANSISTOR 2SD1781K-QR-T97
IC305	8-759-230-43	IC TC7S04F	Q203	8-729-921-81	TRANSISTOR 2SD1781K-QR-T97
IC306	8-752-039-94	IC CXA1263M-T3	Q301	8-729-921-81	TRANSISTOR 2SD1781K-QR-T97
IC401	8-759-230-43	IC TC7S04F	Q303	8-729-921-81	TRANSISTOR 2SD1781K-QR-T97
IC402	8-759-977-71	IC GP1F31T (OPTICAL DIGITAL OUT)	Q401	8-729-904-87	TRANSISTOR 2SB1197K-R
IC501	8-752-033-55	IC CXA1271Q	Q402	8-729-901-78	TRANSISTOR 2SC2412K
IC502	8-752-033-98	IC CXA1272R	Q403	8-729-901-00	TRANSISTOR DTC124EK
IC503	8-759-710-79	IC NJM2107F	Q406	8-729-921-81	TRANSISTOR 2SD1781K-QR-T97
IC504	8-759-030-17	IC MPC1715FU	Q407	8-729-216-22	TRANSISTOR 2SA1162G
IC505	8-759-230-43	IC TC7S04F	Q408	8-729-903-10	TRANSISTOR FMW1
IC601	8-752-332-38	IC CXD1125Q	Q409	8-729-921-84	TRANSISTOR 2SB1182F5-Q
IC602	8-752-328-67	IC CXK5816MA-15L	Q410	8-729-901-03	TRANSISTOR DTC144WK
IC801	8-752-811-62	IC CXP5086-608Q	Q411	8-729-901-00	TRANSISTOR DTC124EK
IC802	8-759-982-77	IC BA10339F	Q412	8-729-207-55	TRANSISTOR RN1401
IC803	8-759-234-10	IC TC7S32F	Q413	8-729-901-78	TRANSISTOR 2SC2412K
IC851	8-759-420-54	IC MN18762-SND-3	Q414	8-729-901-05	TRANSISTOR DTA124EK
IC852	8-759-205-06	IC MC74HC74AF	Q415	8-729-901-03	TRANSISTOR DTC144WK
IC853	8-759-013-92	IC MC74HC164F	Q416	8-729-901-00	TRANSISTOR DTC124EK
IC854	8-759-013-92	IC MC74HC164F	Q417	8-729-921-84	TRANSISTOR 2SB1182F5-Q
IC855	8-759-231-30	IC TC4S30F	Q418	8-729-903-10	TRANSISTOR FMW1
IC856	8-759-234-10	IC TC7S32F	Q420	8-729-907-39	TRANSISTOR IMD2
IC857	8-759-234-10	IC TC7S32F	Q421	8-729-901-05	TRANSISTOR DTA124EK
IC858	8-759-234-10	IC TC7S32F	Q422	8-729-901-00	TRANSISTOR DTC124EK
IC859	8-759-986-85	IC S-8052ALR-LF			
J301	1-563-281-41	JACK (LINE OUT)			
J302	1-563-281-51	JACK (PHONES)			
J401	1-562-961-11	JACK (DC IN 9V)			
J801	1-563-281-61	JACK (REMOTE)			

Ref.No.	Part No.	Description				Ref.No.	Part No.	Description				
Q423	8-729-116-06	TRANSISTOR	2SK160-K6			R309	1-216-833-11	METAL	GLAZE	10K	5%	
Q424	8-729-901-00	TRANSISTOR	DTC124EK			R310	1-216-833-11	METAL	GLAZE	10K	5%	
Q425	8-729-216-22	TRANSISTOR	2SA812			R311	1-216-841-11	METAL	GLAZE	47K	5%	
Q427	8-729-216-22	TRANSISTOR	2SA812			R312	1-216-857-11	METAL	GLAZE	1M	5%	
Q428	8-729-902-96	TRANSISTOR	FMS1			R313	1-216-671-11	METAL	CHIP	6.8K	0.50%	
Q429	8-729-903-10	TRANSISTOR	FMW1			R401	1-216-832-11	METAL	GLAZE	8.2K	5%	
Q430	8-729-116-06	TRANSISTOR	2SK160-K6			R402	1-216-845-11	METAL	GLAZE	100K	5%	
Q431	8-729-807-33	TRANSISTOR	2SB1123-R			R403	1-216-841-11	METAL	GLAZE	47K	5%	
Q432	8-729-901-00	TRANSISTOR	DTC124EK-T-97			R404	1-216-861-11	METAL	GLAZE	2.2M	5%	
Q433	8-729-807-33	TRANSISTOR	2SB112-R			R405	1-216-106-00	METAL	GLAZE	240K	5%	
Q435	8-729-904-87	TRANSISTOR	2SB1197K-R			R406	1-216-837-11	METAL	GLAZE	22K	5%	
Q461	8-729-904-87	TRANSISTOR	2SB1197K-R			R407	1-216-073-00	METAL	GLAZE	10K	5%	
Q462	8-729-921-81	TRANSISTOR	2SD1781K-QR-T97			R408	1-216-857-11	METAL	GLAZE	1M	5%	
Q463	8-729-921-81	TRANSISTOR	2SD1781K-QR-T97			R409	1-216-821-11	METAL	GLAZE	1K	5%	
Q464	8-729-901-05	TRANSISTOR	DTA124EK			R410	1-216-033-00	METAL	GLAZE	220	5%	
Q465	8-729-901-00	TRANSISTOR	DTC124EK			R411	1-216-833-11	METAL	GLAZE	10K	5%	
Q466	8-729-921-81	TRANSISTOR	2SD1781K-QR-T97			R412	1-216-092-00	METAL	GLAZE	62K	5%	
Q501	8-729-402-90	TRANSISTOR	XN4609			R413	1-216-830-11	METAL	GLAZE	5.6K	5%	
Q502	8-729-904-87	TRANSISTOR	2SB1197K			R414	1-216-837-11	METAL	GLAZE	22K	5%	
Q503	8-729-920-78	TRANSISTOR	2SC2412K-R			R415	1-216-821-11	METAL	GLAZE	1K	5%	
Q504	8-729-920-78	TRANSISTOR	2SC2412K-R			R416	1-216-021-00	METAL	GLAZE	68	5%	
Q505	8-729-805-43	TRANSISTOR	2SC3396			R417	1-216-657-11	METAL	CHIP	1.8K	0.50%	
Q506	8-729-901-00	TRANSISTOR	DTC124EK			R418	1-216-664-11	METAL	CHIP	3.6K	0.50%	
Q801	8-729-901-00	TRANSISTOR	DTC124EK			R419	1-216-663-11	METAL	CHIP	3.3K	0.50%	
Q804	8-729-901-05	TRANSISTOR	DTA124EK			R420	1-216-697-11	METAL	CHIP	82K	0.50%	
Q805	8-729-921-81	TRANSISTOR	2SD1781K-QR-T97			R421	1-216-041-00	METAL	GLAZE	470	5%	
Q806	8-729-901-05	TRANSISTOR	DTA124EK			R422	1-216-037-00	METAL	GLAZE	330	5%	
Q807	8-729-907-39	TRANSISTOR	IMD2			R423	1-216-833-11	METAL	GLAZE	10K	5%	
Q808	8-729-901-06	TRANSISTOR	DTA124EK			R426	1-216-861-11	METAL	GLAZE	2.2M	5%	
Q809	8-729-901-00	TRANSISTOR	DTC124EK			R427	1-217-806-11	METAL	GLAZE	1	5%	
R101	1-216-699-11	METAL	CHIP	100K	0.50%	1/10W	R428	1-217-806-11	METAL	GLAZE	1	5%
R102	1-216-699-11	METAL	CHIP	100K	0.50%	1/10W	R429	1-216-834-11	METAL	GLAZE	12K	5%
R103	1-216-675-11	METAL	CHIP	10K	0.50%	1/10W	R430	1-216-826-11	METAL	GLAZE	2.7K	5%
R105	1-216-823-11	METAL	GLAZE	1.5K	5%	1/16W	R435	1-216-821-11	METAL	GLAZE	1K	5%
R106	1-216-053-00	METAL	GLAZE	1.5K	5%	1/10W	R436	1-216-821-11	METAL	GLAZE	1K	5%
R107	1-216-813-11	METAL	GLAZE	220	5%	1/16W	R437	1-216-837-11	METAL	GLAZE	22K	5%
R113	1-216-823-11	METAL	GLAZE	1.5K	5%	1/16W	R438	1-216-041-00	METAL	GLAZE	470	5%
R114	1-216-797-11	METAL	GLAZE	10	5%	1/16W	R439	1-216-821-11	METAL	GLAZE	1K	5%
R115	1-216-833-11	METAL	GLAZE	10K	5%	1/16W	R440	1-216-837-11	METAL	GLAZE	22K	5%
R121	1-216-663-11	METAL	CHIP	3.3K	0.50%	1/10W	R441	1-216-821-11	METAL	GLAZE	1K	5%
R122	1-216-653-11	METAL	CHIP	1.2K	0.50%	1/10W	R442	1-216-017-00	METAL	GLAZE	47	5%
R123	1-216-823-11	METAL	GLAZE	1.5K	5%	1/16W	R443	1-216-041-00	METAL	GLAZE	470	5%
R201	1-216-699-11	METAL	CHIP	100K	0.50%	1/10W	R444	1-216-675-11	METAL	CHIP	10K	0.50%
R202	1-216-699-11	METAL	CHIP	100K	0.50%	1/10W	R469	1-216-833-11	METAL	GLAZE	10K	5%
R203	1-216-675-11	METAL	CHIP	10K	0.50%	1/10W	R471	1-216-821-11	METAL	GLAZE	1K	5%
R205	1-216-823-11	METAL	GLAZE	1.5K	5%	1/16W	R472	1-216-821-11	METAL	GLAZE	1K	5%
R206	1-216-053-00	METAL	GLAZE	1.5K	5%	1/10W	R501	1-216-024-00	METAL	GLAZE	91	5%
R207	1-216-813-11	METAL	GLAZE	220	5%	1/16W	R502	1-216-079-00	METAL	GLAZE	18K	5%
R213	1-216-823-11	METAL	GLAZE	1.5K	5%	1/16W	R503	1-216-834-11	METAL	GLAZE	12K	5%
R214	1-216-797-11	METAL	GLAZE	10	5%	1/16W	R504	1-216-073-00	METAL	GLAZE	10K	5%
R215	1-216-833-11	METAL	GLAZE	10K	5%	1/16W	R505	1-216-105-00	METAL	GLAZE	220K	5%
R221	1-216-663-11	METAL	CHIP	3.3K	0.50%	1/10W	R506	1-216-837-11	METAL	GLAZE	22K	5%
R222	1-216-653-11	METAL	CHIP	1.2K	0.50%	1/10W	R507	1-216-835-11	METAL	GLAZE	15K	5%
R223	1-216-823-11	METAL	GLAZE	1.5K	5%	1/16W	R508	1-216-069-00	METAL	GLAZE	6.8K	5%
R303	1-216-830-11	METAL	GLAZE	5.6K	5%	1/16W	R509	1-216-833-11	METAL	GLAZE	10K	5%
R304	1-216-021-00	METAL	GLAZE	68	5%	1/10W	R510	1-216-150-00	METAL	GLAZE	10	5%
R307	1-216-821-11	METAL	GLAZE	1K	5%	1/16W	R511	1-216-839-11	METAL	GLAZE	33K	5%
R308	1-216-833-11	METAL	GLAZE	10K	5%	1/16W						

Ref.No.	Part No.	Description					Ref.No.	Part No.	Description				
R512	1-216-837-11	METAL GLAZE	22K	5%	1/16W		R811	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R513	1-216-859-11	METAL GLAZE	1.5M	5%	1/16W		R812	1-216-824-11	METAL GLAZE	1.8K	5%	1/16W	
R514	1-216-851-11	METAL GLAZE	330K	5%	1/16W		R813	1-216-821-11	METAL GLAZE	1K	5%	1/16W	
R515	1-216-833-11	METAL GLAZE	10K	5%	1/16W		R814	1-216-298-00	METAL GLAZE	2.2	5%	1/10W	
R516	1-216-843-11	METAL GLAZE	68K	5%	1/16W		R815	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R517	1-216-845-11	METAL GLAZE	100K	5%	1/16W		R816	1-218-163-11	METAL GLAZE	120K	1%	1/10W	
R518	1-216-106-00	METAL GLAZE	240K	5%	1/10W		R817	1-216-694-11	METAL CHIP	62K	0.50%	1/10W	
R519	1-216-844-11	METAL GLAZE	82K	5%	1/16W		R818	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W	
R520	1-216-844-11	METAL GLAZE	82K	5%	1/16W		R819	1-216-654-11	METAL CHIP	1.3K	0.50%	1/10W	
R521	1-216-837-11	METAL GLAZE	22K	5%	1/16W		R820	1-216-653-11	METAL CHIP	1.2K	0.50%	1/10W	
R522	1-216-845-11	METAL GLAZE	100K	5%	1/16W		R821	1-216-086-00	METAL GLAZE	36K	5%	1/10W	
R523	1-216-826-11	METAL GLAZE	2.7K	5%	1/16W		R823	1-216-857-11	METAL GLAZE	1M	5%	1/16W	
R524	1-216-118-00	METAL GLAZE	750K	5%	1/10W		R824	1-216-837-11	METAL GLAZE	22K	5%	1/16W	
R525	1-216-833-11	METAL GLAZE	10K	5%	1/16W		R826	1-216-833-11	METAL GLAZE	10K	5%	1/16W	
R526	1-216-841-11	METAL GLAZE	47K	5%	1/16W		R827	1-216-845-11	METAL GLAZE	100K	5%	1/16W	
R527	1-216-687-11	METAL CHIP	33K	0.50%	1/10W		R832	1-216-849-11	METAL GLAZE	220K	5%	1/16W	
R528	1-216-103-00	METAL GLAZE	180K	5%	1/10W		R833	1-216-833-11	METAL GLAZE	10K	5%	1/16W	
R529	1-216-062-00	METAL GLAZE	3.6K	5%	1/10W		R839	1-216-837-11	METAL GLAZE	22K	5%	1/16W	
R530	1-216-826-11	METAL GLAZE	2.7K	5%	1/16W		R851	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R531	1-216-121-00	METAL GLAZE	1M	5%	1/10W		R852	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R532	1-216-687-11	METAL CHIP	33K	0.50%	1/10W		R853	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R533	1-216-833-11	METAL GLAZE	10K	5%	1/16W		R854	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R534	1-216-826-11	METAL GLAZE	2.7K	5%	1/16W		R855	1-216-678-11	METAL CHIP	13K	0.50%	1/10W	
R535	1-216-821-11	METAL GLAZE	1K	5%	1/16W		R856	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R536	1-216-846-11	METAL GLAZE	120K	5%	1/16W		R857	1-216-658-11	METAL CHIP	2K	0.50%	1/10W	
R537	1-216-846-11	METAL GLAZE	120K	5%	1/16W		R858	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R538	1-216-841-11	METAL GLAZE	47K	5%	1/16W		R859	1-216-675-11	METAL CHIP	10K	0.50%	1/10W	
R539	1-216-857-11	METAL GLAZE	1M	5%	1/16W		R860	1-216-682-11	METAL CHIP	20K	0.50%	1/10W	
R540	1-216-073-00	METAL GLAZE	10K	5%	1/10W		R901	1-216-021-00	METAL GLAZE	68	5%	1/10W	
R542	1-216-847-11	METAL GLAZE	150K	5%	1/16W		R902	1-216-021-00	METAL GLAZE	68	5%	1/10W	
R543	1-216-847-11	METAL GLAZE	150K	5%	1/16W		R903	1-216-021-00	METAL GLAZE	68	5%	1/10W	
R544	1-216-825-11	METAL GLAZE	2.2K	5%	1/16W		R904	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R545	1-216-838-11	METAL GLAZE	27K	5%	1/16W		R951	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R546	1-216-840-11	METAL GLAZE	39K	5%	1/16W		R952	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R548	1-216-829-11	METAL GLAZE	4.7K	5%	1/16W		RV401	1-237-325-11	RES, ADJ, METAL GLAZE	4.7K			
R549	1-216-857-11	METAL GLAZE	1M	5%	1/16W		RV402	1-237-328-11	RES, ADJ, METAL GLAZE	47K			
R550	1-216-825-11	METAL GLAZE	2.2K	5%	1/16W		RV501	1-230-869-11	RES, ADJ, METAL GLAZE	4.7K			
R551	1-216-825-11	METAL GLAZE	2.2K	5%	1/16W		RV502	1-230-871-11	RES, ADJ, METAL GLAZE	22K			
R552	1-216-827-11	METAL GLAZE	3.3K	5%	1/16W		RV503	1-230-873-11	RES, ADJ, METAL GLAZE	47K			
R553	1-216-825-11	METAL GLAZE	2.2K	5%	1/16W		RV504	1-237-575-11	RES, ADJ, METAL GLAZE	1.0K			
R554	1-216-049-00	METAL GLAZE	1K	5%	1/10W		RV505	1-230-873-11	RES, ADJ, METAL GLAZE	47K			
R555	1-216-861-11	METAL GLAZE	2.2M	5%	1/16W		RV801	1-237-143-11	RES, ADJ, METAL GLAZE	10K			
R556	1-216-109-00	METAL GLAZE	330K	5%	1/10W		S701	1-571-099-11	SWITCH (LIMIT)				
R557	1-216-857-11	METAL GLAZE	1M	5%	1/16W		S801	1-571-484-11	SWITCH, KEY BOARD(ENTER REMAIN PLAY KEY)				
R601	1-216-841-11	METAL GLAZE	47K	5%	1/16W		S802	1-570-204-11	SWITCH, KEY BOARD (D <small>00</small>)				
R602	1-216-845-11	METAL GLAZE	100K	5%	1/16W		S803	1-570-204-11	SWITCH, KEY BOARD (□)				
R603	1-216-841-11	METAL GLAZE	47K	5%	1/16W		S804	1-570-204-11	SWITCH, KEY BOARD (◀)				
R801	1-216-833-11	METAL GLAZE	10K	5%	1/16W		S805	1-570-204-11	SWITCH, KEY BOARD (▶)				
R802	1-216-837-11	METAL GLAZE	22K	5%	1/16W		S808	1-572-003-11	SWITCH, SLIDE (HOLD ▶)				
R803	1-216-837-11	METAL GLAZE	22K	5%	1/16W		S901	1-554-911-11	SWITCH, LEAF (OPEN)				
R804	1-216-837-11	METAL GLAZE	22K	5%	1/16W		S902	1-571-737-21	SWITCH, KEY BBOARD (REFLOW)(EQ)				
R805	1-216-833-11	METAL GLAZE	10K	5%	1/16W		S903	1-571-737-21	SWITCH, KEY BBOARD (REFLOW)(+)				
R806	1-216-841-11	METAL GLAZE	47K	5%	1/16W		S904	1-571-737-21	SWITCH, KEY BBOARD (REFLOW)(-)				
R807	1-216-851-11	METAL GLAZE	330K	5%	1/16W		S905	1-571-737-21	SWITCH, KEY BBOARD (REFLOW)(+)				
R808	1-216-041-00	METAL GLAZE	470	5%	1/10W		S906	1-571-737-21	SWITCH, KEY BBOARD (REFLOW)(-)				
R809	1-216-009-00	METAL GLAZE	22	5%	1/10W		S907	1-571-737-21	SWITCH, KEY BBOARD (REFLOW)(MODE)				
R810	1-216-827-11	METAL GLAZE	3.3K	5%	1/16W		X301	1-567-737-11	VIBRATOR, CRYSTAL				
							X801	1-577-064-11	VIBRATOR, CHIP CERAMIC				
							X851	1-567-196-11	OSCILLATOR, CERAMIC				

ACCESSORY & PACKING MATERIAL

1-463-691-11 (US)...ADAPTOR, AC (AC-930A)
1-463-700-11 (UK)...ADAPTOR, AC (AC-930A)
1-463-702-11 (E)...ADAPTOR, AC (AC-950W)
1-463-705-11 (AEP,FRENCH)...ADAPTOR, AC (AC-930AEP)
1-463-968-11 (US)...ADAPTOR, AC (AC-940)
1-526-565-00 (E)...AC PLUG ADAPTOR

1-528-297-11 (US,UK,E).....BATTERY PACK (BP-2EX)
1-528-297-21 (AEP,FRENCH)....BATTERY PACK (BP-2EX)

1-555-658-21 CORD, CONNECTION

3-750-539-11 (AEP,FRENCH,UK,E)...MANUAL, INSTRUCTION
3-750-539-21 (US).....MANUAL, INSTRUCTION
3-750-539-41 (AEP).....MANUAL, INSTRUCTION

4-920-407-01 (US)...BAG, PROTECTION
4-926-173-01 CASE, CARRYING

*4-926-192-01 CUSHION (UPPER)
4-926-193-01 (US,E).....CUSHION (LOWER)
*4-932-701-01 (AEP,FRENCH,UK)...CUSHION (LOWER)

*4-926-194-01 (US).....INDIVIDUAL CARTON
*4-926-199-01 (E).....INDIVIDUAL CARTON
*4-932-702-01 (AEP).....INDIVIDUAL CARTON
*4-932-704-01 (FRENCH,UK)...INDIVIDUAL CARTON